H.R. 2480—THE URANIUM ENRICHMENT REORGANIZATION ACT

HEARING

BEFORE THE

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

OCTOBER 11, 1990

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H.R. 2480—THE URANIUM ENRICHMENT REORGANIZATION ACT

THURSDAY, OCTOBER 11, 1990

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, D.C.

The Committee met, pursuant to notice, at 10:08 a.m. in room 2318, Rayburn House Office Building, Hon. Robert A. Roe [Chairman of the Committee] presiding.

The CHAIRMAN. The Committee will come to order.

Without objection, permission is granted for coverage of this meeting by television, radio, and still photography.

I think, in view of the schedule around here, we are going to get started. The other Members are on their way. We just have to be patient with them.

The issue before the Committee this morning could not have reached this point without the tremendous effort put forward by two very dedicated Members of the Committee. Energy Subcommittee Chairman Marilyn Lloyd and Ranking Republican Member Sid Morrison deserve particular acclaim and recognition for their leadership in moving this legislation along. They have performed yeoman's work in wrestling with this complicated issue. It has taken considerable time and effort to track and understand the program.

I want to particularly, on behalf of the Committee, commend them for their dedication and commitment to this program.

To the two of you, I want to say good work. I really salute you for a job well done.

This morning the Committee will review H.R. 2480, the legislative proposal for restructuring the Department of Energy's uranium enrichment enterprise, which was reported to the full Committee on July 20, 1990, by the Subcommittee on Energy Research and Development.

The Energy Research and Development Subcommittee jurisdiction has historically included legislative and oversight responsibility for the Department of Energy's Enrichment Program. Proposals for the reorganization of this program have been considered by the panel during the past two Congresses. In evaluating the current proposal, the Subcommittee has held two hearings on the bill and one on the Smith Barney independent financial assessment. In our full Committee deliberations today, we will hear testimony on the restructuring proposal from several expert witnesses.

We would be remiss to consider this, or any other energy proposal, without placing it in the context of the broader energy perspec-

tive. Unfortunately, America's concern about its dependence on imported oil really waxes and wanes with the shift of global politics. The Iraqi invasion of Kuwait and the disruption of the flow of oil from these two countries once again has driven home the extent of our dependence on foreign oil and our vulnerability to interruptions of supply. A shutoff of roughly 5 percent of the world's oil supply has lead to a doubling of oil prices. This has reverberated throughout our economy, affecting motorists, airlines, and other businesses, and is creating concerns about an adequate supply of home heating oil as the winter months approach.

We all know that the ultimate resolution to these concerns will be to wean the United States away from its strong dependency on foreign oil and develop a greater national reliance on substitute fuels wherever possible.

In that context, today we are looking specifically at our uranium enrichment enterprise, the Department of Energy's entity that produces the fuel for most of our nuclear power plants which, in turn, provide about 20 percent of our nation's electricity.

The United States was once the only supplier of enriched uranium in the free world. As recently as 15 years ago, we enjoyed a monopoly position for both domestic and foreign supplies of enriched uranium. Under such conditions, we established rules for the uranium enrichment enterprise to insure that it did not abuse its monopolistic powers. Restrictions were imposed on contracting and pricing provisions with its customers, and we required that the enterprise make its policy and investment decisions through the political process and that funds for its operation be provided through the budget process. We provided funds to the enterprise, even though the revenues from its civilian commercial operations exceeded its appropriations expenditures. Under monopolistic conditions, such procedures were deemed necessary and appropriate to protect the utility customers and ultimately the electric ratepayers.

Today, the uranium enrichment market is not a monopoly: it is very competitive on a worldwide basis. The Department of Energy uranium enrichment enterprise now has only 40 percent of the world market and has already lost domestic customers to foreign suppliers. The attached article from Monday's *Wall Street Journal* provides a concrete example of the competitive market that exists in the uranium enrichment world today. As you know, that was the article that was published having to do with contractual agreements now with the Soviet Union.

Four United States utilities have negotiated a contract with the USSR for enrichment services beginning in 1994. The USSR is not the only other player. There are two established producers in Europe providing enrichment services, and other commercial producers are emerging in China and Japan. There is even a commercial venture proposed for the United States; namely, in the Great State of Louisiana.

The bottom line is that times have changed, and the old way of doing business is not well suited to a competitive market.

We cannot have the critical business decisions of the enterprise made through our government budget process. Let me give you an example. The other day when we were locked in our budget struggle we received from the Budget Committee a document which

listed the effects of the budget sequester. Among the items in the list was a line which stated, "This"—namely, the sequester—"would terminate all uranium enrichment projects, including the Atomic Vapor Laser Isotope Separation, the AVLIS program. It would make it infeasible for DOE to meet its contractual commitments to electric utilities."

The AVLIS technology is the future hope, we believe, for a United States uranium enrichment industry, be it federally owned or be it privately owned. Our existing technology is old and energy intensive. If the United States-produced uranium is to compete, we must have more efficient technology and, in our judgment, that means the AVLIS process. Yet, as a budget expediency, we were ready to terminate the AVLIS program. Furthermore, we would have forced the uranium enrichment enterprise to default on its deliveries at a time when its receipts from enrichment contract sales exceeded its appropriations.

Trying to develop an appropriate Uranium Enrichment enterprise for the United States in a new era of competitive forces and changing energy demands is at best a very complex task. We have had two objectives in holding this full Committee hearing today. First has been to present the legislation in an open forum where Members of the Committee could examine its various provisions with the help and consultation of our expert witnesses. The second has been to provide a balanced slate of witnesses. We have tried to accommodate those who have articulated concerns and objections regarding provisions of this bill, as well as those who express general endorsement.

Several Members of the Committee have voiced concern about the claim of unrecovered costs. We have with us the managing director of the firm that conducted a financial assessment of our enrichment enterprise, a counsel from the National Taxpayers Union, and our most distinguished Deputy Secretary Henson Moore of the Department of Energy. Among the three of them, we should be able to air the uncovered cost issue in a thorough and efficient manner.

Another expressed uncertainty has been the responsibility and the cost estimate for the eventual decontamination and decommissioning of the uranium enrichment facilities. There have been claims that the estimated cost for the Department of Defense procedures far exceeds the proposed revenue that the corporation could be required to collect. We expect to have specific answers to these concerns and any others that emerge from the discussion today by the Members of this Committee.

In my judgment, America cannot operate a commercial activity in a competitive market under the current political arrangement. If we are to avoid becoming a major importer of yet another energy source, then we need to take steps now to ensure a healthy, viable domestic uranium enrichment operation.

The Chair wants to again thank the two leaders so far that have done such a great work in the Subcommittee. I think for our guests that are here today and the Members, this is probably one of the most significant hearings that could be held at this particular time in view of the energy crisis that not only faces our country from an economic development point of view, but the rest of the world.

[The prepared statements of Messers. Roe, Bruce, and Rezendes follow:]

NEWS from:

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

U.S. House of Representatives

Robert A. Roe, Chairman

Robert S. Walker
Ranking Republican Member

HONORABLE ROBERT A. ROE
OPENING STATEMENT
OCTOBER 11, 1990

THE ISSUE BEFORE THE COMMITTEE THIS MORNING COULD NOT HAVE REACHED THIS POINT WITHOUT THE TREMENDOUS EFFORT PUT FORWARD BY TWO VERY DEDICATED MEMBERS OF THE COMMITTEE. ENERGY SUBCOMMITTEE CHAIRMAN MARILYN LLOYD AND RANKING REPUBLICAN MEMBER SID MORRISON DESERVE RECOGNITION FOR THEIR LEADERSHIP IN MOVING THIS LEGISLATION. THEY HAVE PERFORMED YEOMEN'S WORK IN WRESTLING WITH THIS COMPLICATED ISSUE. IT HAS TAKEN CONSIDERABLE TIME AND EFFORT TO TRACK AND UNDERSTAND THIS PROGRAM. I COMMEND THEM FOR THEIR DEDICATION AND COMMITMENT. TO THE TWO OF YOU I WANT TO SAY, GOOD WORK. I SALUTE YOU.

THIS MORNING, THE COMMITTEE WILL REVIEW H.R. 2480, THE LEGISLATIVE PROPOSAL FOR RESTRUCTURING THE DEPARTMENT OF ENERGY'S (DOE) URANIUM ENRICHMENT ENTERPRISE WHICH WAS REPORTED TO THE FULL COMMITTEE ON JULY 20, 1990 BY THE SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT (ERD).

THE ERD SUBCOMMITTEE JURISDICTION HAS HISTORICALLY INCLUDED LEGISLATIVE AND OVERSIGHT RESPONSIBILITY FOR DOE'S ENRICHMENT PROGRAM. PROPOSALS FOR THE REORGANIZATION OF THIS PROGRAM HAVE BEEN CONSIDERED BY THE PANEL DURING THE PAST TWO CONGRESSES. IN EVALUATING THE CURRENT PROPOSAL, THE SUBCOMMITTEE HAS HELD TWO HEARINGS ON THE BILL AND ONE ON THE SMITH BARNEY INDEPENDENT FINANCIAL ASSESSMENT. IN OUR FULL COMMITTEE DELIBERATIONS TODAY, WE WILL HEAR TESTIMONY ON THE RESTRUCTURING PROPOSAL FROM SEVERAL EXPERT WITNESSES.

WE WOULD BE REMISS TO CONSIDER THIS, OR ANY OTHER ENERGY PROPOSAL, WITHOUT PLACING IT IN THE CONTEXT OF THE BROADER ENERGY PROSPECTIVE. UNFORTUNATELY, AMERICA'S CONCERN ABOUT ITS DEPENDENCE ON IMPORTED OIL WAXES AND WANES WITH THE SHIFT OF GLOBAL POLITICS. THE IRAQI INVASION OF KUWAIT AND THE DISRUPTION OF THE FLOW OF OIL FROM THESE TWO COUNTRIES ONCE AGAIN HAS DRIVEN HOME THE EXTENT OF OUR DEPENDENCE ON FOREIGN OIL AND OUR VULNERABILITY TO INTERRUPTIONS OF SUPPLY. A SHUT OFF OF ROUGHLY 5% OF THE WORLD'S OIL SUPPLY HAS LEAD TO A DOUBLING OF OIL PRICES. THIS HAS REVERBERATED THROUGHOUT OUR ECONOMY EFFECTING MOTORISTS, AIRLINES AND OTHER BUSINESSES AND IS CREATING CONCERNS ABOUT AN ADEQUATE SUPPLY OF HOME HEATING OIL AS WE APPROACH THE WINTER SEASON.

WE ALL KNOW THAT THE ULTIMATE RESOLUTION TO THESE CONCERNS WILL BE TO WEAN THE U.S. FROM ITS STRONG DEPENDENCY ON IMPORTED OIL, AND TO DEVELOP A GREATER NATIONAL RELIANCE ON SUBSTITUTE FUELS WHEREVER POSSIBLE.

IN THAT CONTEXT, TODAY WE ARE LOOKING SPECIFICALLY AT OUR URANIUM ENRICHMENT ENTERPRISE, THE DEPARTMENT OF ENERGY'S ENTITY THAT PRODUCES THE FUEL FOR MOST OF OUR NUCLEAR POWER PLANTS WHICH, IN TURN, PROVIDE ABOUT 20% OF OUR NATION'S ELECTRICITY.

THE U.S. WAS ONCE THE ONLY SUPPLIER OF ENRICHED URANIUM TO THE FREE WORLD. AS RECENTLY AS 15 YEARS AGO, WE ENJOYED A MONOPOLY POSITION FOR BOTH DOMESTIC AND FOREIGN SUPPLIES OF ENRICHED URANIUM. UNDER SUCH CONDITIONS, WE ESTABLISHED RULES FOR THE URANIUM ENRICHMENT ENTERPRISE TO INSURE THAT IT DID NOT ABUSE ITS MONOPOLISTIC POWERS. RESTRICTIONS WERE IMPOSED ON CONTRACTING AND PRICING PROVISIONS WITH ITS CUSTOMERS; AND WE REQUIRED THAT THE ENTERPRISE MAKE ITS POLICY AND INVESTMENT DECISIONS THROUGH THE POLITICAL PROCESS AND THAT FUNDS FOR ITS OPERATION BE PROVIDED THROUGH THE BUDGET PROCESS. WE PROVIDED FUNDS TO THE ENTERPRISE EVEN THOUGH THE REVENUES FROM ITS CIVILIAN

-OVER-

COMMERCIAL OPERATIONS EXCEEDED ITS APPROPRIATIONS EXPENDITURES. UNDER MONOPOLISTIC CONDITIONS SUCH PROCEDURES WERE DEEMED NECESSARY AND APPROPRIATE TO PROTECT THE UTILITY CUSTOMERS AND ULTIMATELY THE ELECTRIC RATEPAYERS.

TODAY, THE URANIUM ENRICHMENT MARKET IS NOT A MONOPOLY; IT IS VERY COMPETITIVE ON A WORLDWIDE BASIS. THE DEPARTMENT OF ENERGY URANIUM ENRICHMENT ENTERPRISE NOW HAS ONLY 40% OF THE WORLD MARKET AND HAS ALREADY LOST DOMESTIC CUSTOMERS TO FOREIGN SUPPLIERS. THE ATTACHED ARTICLE FROM MONDAY'S WALL STREET JOURNAL PROVIDES A CONCRETE EXAMPLE OF THE COMPETITIVE MARKET THAT EXISTS IN THE URANIUM ENRICHMENT WORLD TODAY. FOUR U.S. UTILITIES HAVE NEGOTIATED A CONTRACT WITH THE U.S.S.R. FOR ENRICHMENT SERVICES BEGINNING IN 1994. THE U.S.S.R. IS NOT THE ONLY OTHER PLAYER. THERE ARE TWO ESTABLISHED PRODUCERS IN EUROPE PROVIDING ENRICHMENT SERVICES AND OTHER COMMERCIAL PRODUCERS ARE EMERGING IN CHINA AND JAPAN. THERE IS EVEN A COMMERCIAL VENTURE PROPOSED FOR THE UNITED STATES, NAMELY, THE LOUISIANA ENERGY SERVICES.

THE BOTTOM LINE IS THAT TIMES HAVE CHANGED, AND THE OLD WAY OF DOING BUSINESS IS NOT WELL SUITED TO A COMPETITIVE MARKET.

WE CANNOT HAVE THE CRITICAL BUSINESS DECISIONS OF THE ENTERPRISE MADE THROUGH OUR GOVERNMENT BUDGET PROCESS. LET ME GIVE YOU AN EXAMPLE. THE OTHER DAY WHEN WE WERE LOCKED IN OUR BUDGET STRUGGLE WE RECEIVED FROM THE BUDGET COMMITTEE A DOCUMENT WHICH LISTED THE EFFECTS OF THE BUDGET SEQUESTER. AMONG THE ITEMS IN THIS LIST WAS A LINE WHICH STATED, "THIS [THE SEQUESTER] WOULD TERMINATE ALL URANIUM ENRICHMENT PROJECTS, INCLUDING THE ATOMIC VAPOR LASER ISOTOPE SEPARATION (AVLIS) PROGRAM. IT WOULD MAKE IT INFEASIBLE FOR DOE TO MEET ITS CONTRACTUAL COMMITMENTS TO ELECTRIC UTILITIES."

THE AVLIS TECHNOLOGY IS THE FUTURE HOPE FOR A U.S. URANIUM ENRICHMENT INDUSTRY BE IT FEDERALLY OWNED OR BE IT PRIVATE. OUR EXISTING TECHNOLOGY IS OLD AND ENERGY INTENSIVE. IF U.S. PRODUCED URANIUM IS TO COMPETE, WE WILL NEED MORE EFFICIENT TECHNOLOGY AND THAT MEANS AVLIS. YET, AS A BUDGET EXPEDIENCY, WE WERE READY TO TERMINATE THE AVLIS PROGRAM. FURTHERMORE, WE WOULD HAVE FORCED THE URANIUM ENRICHMENT ENTERPRISE TO DEFAULT ON ITS DELIVERIES, AT A TIME WHEN ITS RECEIPTS FROM ENRICHMENT CONTRACT SALES EXCEED ITS APPROPRIATIONS.

TRYING TO DEVELOP AN APPROPRIATE URANIUM ENRICHMENT ENTERPRISE FOR THE UNITED STATES IN A NEW ERA OF COMPETITIVE FORCES AND CHANGING ENERGY DEMANDS IS AT BEST A VERY COMPLEX TASK. WE HAVE HAD TWO OBJECTIVES IN HOLDING THIS FULL COMMITTEE HEARING. THE FIRST HAS BEEN TO PRESENT THE LEGISLATION IN AN OPEN FORUM WHERE MEMBERS OF THE COMMITTEE COULD EXAMINE ITS VARIOUS PROVISIONS WITH THE HELP AND CONSULTATION OF OUR EXPERT WITNESSES. THE SECOND HAS BEEN TO PROVIDE A BALANCED SLATE OF WITNESSES. WE HAVE TRIED TO ACCOMMODATE THOSE WHO HAVE ARTICULATED CONCERNS AND OBJECTIONS REGARDING PROVISIONS OF THE BILL, AS WELL AS THOSE WHO HAVE EXPRESSED GENERAL ENDORSEMENT.

SEVERAL MEMBERS OF THE COMMITTEE HAVE VOICED CONCERNS ABOUT THE CLAIM OF UNRECOVERED COSTS. WE HAVE WITH US THE MANAGING DIRECTOR OF THE FIRM THAT CONDUCTED A FINANCIAL ASSESSMENT OF OUR ENRICHMENT ENTERPRISE, A COUNSEL FROM THE NATIONAL TAXPAYERS UNION, AND DEPUTY SECRETARY HENSON MOORE OF THE DEPARTMENT OF ENERGY. AMONG THE THREE OF THEM, WE SHOULD BE ABLE TO AIR THE UNRECOVERED COST ISSUE IN A THOROUGH AND EFFECTIVE MANNER.

ANOTHER EXPRESSED UNCERTAINTY HAS BEEN THE RESPONSIBILITY AND THE COST ESTIMATE FOR THE EVENTUAL DECONTAMINATION AND DECOMMISSIONING OF THE URANIUM ENRICHMENT FACILITIES. THERE HAVE BEEN CLAIMS THAT THE ESTIMATED COST FOR THE D&D PROCEDURES FAR EXCEEDS THE PROPOSED REVENUE THAT THE "CORPORATION" WOULD BE REQUIRED TO COLLECT. WE EXPECT TO HAVE SPECIFIC ANSWERS TO THESE CONCERNS AND ANY OTHERS THAT EMERGE FROM THE DISCUSSION TODAY.

AMERICA CANNOT OPERATE A COMMERCIAL ACTIVITY IN A COMPETITIVE MARKET UNDER THE CURRENT POLITICAL ARRANGEMENT. IF WE ARE TO AVOID BECOMING A MAJOR IMPORTER OF YET ANOTHER ENERGY SOURCE, THEN WE NEED TO TAKE STEPS NOW TO ENSURE A HEALTHY, VIABLE DOMESTIC URANIUM ENRICHMENT OPERATION. WE ARE HERE TODAY TO HEAR TESTIMONY FROM EXPERT WITNESS ON RECOMMENDATIONS TO ACHIEVE THAT GOAL.

THE HONORABLE TERRY L. BRUCE
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
OCTOBER 11, 1990

MR. CHAIRMAN, THANK YOU FOR HOLDING THIS IMPORTANT HEARING ON THE URANIUM ENRICHMENT REORGANIZATION ACT. I WOULD LIKE TO WELCOME OUR MANY DISTINGUISHED WITNESSES HERE TODAY, AND I LOOK FORWARD TO GAINING FURTHER INSIGHT FROM THEIR TESTIMONIES.

AS A MEMBER OF BOTH THE ENERGY RESEARCH AND DEVELOPMENT SUBCOMMITTEE AND THE ENERGY AND POWER SUBCOMMITTEE, I HAVE HAD THE OPPORTUNITY TO REVIEW THE CONDITION OF OUR URANIUM ENRICHMENT ENTERPRISE AND THE MERITS OF THE LEGISLATION BEFORE US TODAY. I BELIEVE THAT WHILE DISAGREEMENTS WILL CONTINUE TO EXIST REGARDING THE TREATMENT OF UNRECOVERED COSTS AND IMPUTED INTEREST CALCULATIONS, THIS COMMITTEE MUST NOT ALLOW ITSELF TO GET BOGGED DOWN BY DIFFERENCES IN NUMERICAL STATISTICS. THE HARSH REALITY FACING US TODAY IS THAT OUR COUNTRY CANNOT AFFORD TO MAINTAIN THE STATUS QUO WITH AN URANIUM ENRICHMENT PROGRAM BESET WITH PROBLEMS DAMAGING TO OUR FISCAL WELL-BEING.

THE BILL BEFORE US TODAY IS AN EXCELLENT STARTING POINT FOR REORGANIZING THE ENRICHMENT PROGRAM. THE CORPORATION CREATED BY THE BILL WILL HELP TO MAXIMIZE THE VALUE OF OUR DOMESTIC URANIUM ENRICHMENT INDUSTRY BY PUTTING PRIVATE SECTOR INCENTIVES INTO PLAY. THIS TYPE OF ENTITY WILL CERTAINLY BE MORE COMPETITIVE IN THE INTERNATIONAL MARKETPLACE. I LOOK FORWARD TO THE DAY WHEN THIS CORPORATION HAS COMPILED A SUCCESSFUL COMMERCIAL TRACK RECORD, THE AVLIS TECHNOLOGY IN ON-LINE, AND THE INDUSTRY CAN BE PRIVATIZED.

HOWEVER, REACHING THE POINT WHEN THIS INDUSTRY CAN BE PRIVATIZED PRESENTS A MAJOR CHALLENGE AND INVOLVES A CERTAIN ELEMENT OF RISK.

THE LEGISLATION IN ITS CURRENT FORM WOULD HAVE THE TAXPAYERS BEARING TOO LARGE A BURDEN OF THIS RISK. THE PROVISION TO REPEAL SECTION 161V OF THE ATOMIC ENERGY ACT, WHILE ENABLING THE CORPORATION TO HAVE THE PRICING FLEXIBILITY NEEDED TO ATTRACT CUSTOMERS, WOULD ALSO ALLOW COSTS TO GO UNRECOVERED. FOR REASONS OF FISCAL RESPONSIBILITY, THE BILL MUST ENSURE THAT COSTS ARE FULLY RECOVERED. SIMILARLY, THE RISK IN PUTTING THE AVLIS TECHNOLOGY ON-LINE SHOULD NOT BE ABSORBED SOLELY BY THE TAXPAYERS. THESE ARE TWO AREAS IN WHICH THE BILL NEEDS STRENGTHENING.

ANOTHER CONCERN I HAVE PERTAINS TO THE RECOMMENDATIONS OF THE SMITH-BARNEY REPORT. IN THE SO-CALLED "UNABRIDGED OR UNSANITIZED" VERSION OF THE REPORT, THE RECOMMENDED PRICING STRATEGY OFFERED IS TO PRICE AT THE MAXIMUM LEVEL FOR CUSTOMERS UNDER THE USEC CONTRACT. WITH THESE RECOMMENDATIONS IN MIND, I AM CONFUSED AS TO WHY THE LEGISLATION IS TAKING THE OPPOSITE APPROACH. WINNING BACK CUSTOMERS BY REDUCING PRICES MAY NOT BE SMART IF PROFITABILITY WOULD BE DECREASED AND COSTS COULD GO UNRECOVERED.

THANK YOU AGAIN, AND I LOOK FORWARD TO TODAY'S IMPORTANT HEARING.

United States General Accounting Office

GAO Testimony

For Delivery on
October 11, 1990

Comments on H.R.2480, The Uranium Enrichment Reorganization Act

Statement for the Record of
Victor S. Rezendes
Director, Energy Issues
Resources, Community, and Economic
Development Division

Before the
Committee on Science, Space, and
Technology
House of Representatives

Mr. Chairman and Members of the Committee:

We are pleased to submit this statement for the record to the Committee as it considers legislation that would restructure the Department of Energy's (DOE) uranium enrichment program. This statement presents our views on the future of DOE's uranium enrichment program and focuses on the Uranium Enrichment Reorganization Act (H.R.2480).

H.R.2480 would restructure DOE's enrichment program as a government corporation subject to the Government Corporation Control Act. In doing so, it would, among other things, allow the corporation to set prices to maximize long-term returns; establish a fund to meet future decontamination, decommissioning, and remedial action costs associated with past uranium enrichment activities[1]; and require the government to pay its share of the costs to clean up mining wastes generated under past government contracts.

In summary, we have long supported restructuring the program as a government corporation and establishing a decommissioning fund. We believe H.R.2480 goes a long way toward establishing clear objectives for the enrichment program and allowing it to operate in a more businesslike manner in a competitive market. We

[1]At the end of their useful lives, radioactively contaminated facilities must be decontaminated and decommissioned to ensure that they do not cause environmental damage.

are also pleased that the bill would direct the government to meet its financial obligation to clean up mill tailings (mining waste) sites. However, we have several concerns with the proposed legislation that we would like to highlight at this time.

-- We believe H.R.2480 should include a specific goal to recover past government costs associated with DOE's uranium enrichment program. At the end of fiscal year 1989, we estimate that DOE had not recovered about $9.9 billion in past costs from its customers. H.R.2480 would limit the government's cost recovery to unspecified dividends on stock issued by the new corporation to the Treasury and proceeds from the sale of that stock to the public, if and when the corporation is privatized. Unless problems related to licensing uncertainties, increased competition, and billions of dollars in liabilities are adequately resolved, we doubt whether the corporation will ever be sold. Therefore, we believe that the Congress should set a definite cost recovery goal rather than rely on unspecified dividend receipts and uncertain stock sales.

-- We support the establishment of a decommissioning fund to pay current and future cleanup costs with annual matching contributions from DOE and the corporation. Past production from DOE's enrichment plants for defense and commercial customers has been about equal. Therefore, we

believe that cleanup costs for facilities transferred under the proposed legislation should be equally shared, but the cost for cleaning up any new facilities should rest with the new corporation. H.R.2480, while providing for annual matched funding, requires that cleanup costs be allocated between the government and corporation on the basis of the time period during which the contamination occurred. This is an attempt to separate past commercial and defense activities. Unfortunately, cleanup costs are largely undefined, and DOE does not have adequate information to allocate these costs between past commercial and defense activities. We believe that by requiring matching payments the fund adequately assigns cleanup responsibility on the basis of past production, and further attempts to allocate costs will lead to confusion and disputes between the new corporation and DOE.

Before I discuss these issues in detail, I will briefly describe DOE's enrichment activities and the proposed legislation.

OVERVIEW OF THE URANIUM ENRICHMENT PROGRAM

The federal government has enriched uranium for defense purposes and commercial nuclear power plants for over 30 years at three gaseous diffusion plants located in Oak Ridge, Tennessee; Portsmouth, Ohio; and Paducah, Kentucky. Throughout the 1970s, the

anticipated growth of nuclear power led DOE to expand the enriched uranium production capacity at its three gaseous diffusion plants and begin construction of a new enrichment plant using a different production technology--gas centrifuge--at Portsmouth. However, the anticipated demand for enriched uranium did not materialize, and foreign enrichment suppliers cut into DOE's domestic and foreign markets. In 1985, DOE halted construction of the gas centrifuge plant and shut down the Oak Ridge plant.

By 1986, the program was beset by many problems that left it facing a bleak financial future, including potential multibillion dollar payments for electricity not used under long-term "take or pay" contracts initiated with the Tennessee Valley Authority in the mid-1970s, when demand was expected to increase rapidly. Although some problems have been resolved, DOE today faces multibillion dollar environmental and decommissioning costs and increasing foreign competition. In addition, DOE's responsibility for past unrecovered costs has not yet been defined.

PRINCIPAL FEATURES OF THE PROPOSED LEGISLATION

H.R.2480 proposes, among other things, to do the following:

-- Restructure DOE's enrichment program as a government corporation subject to the Government Corporation Control Act.

-- Allow the corporation to set prices to maximize long-term returns.

-- Require the corporation to issue capital stock initially valued at $3 billion to the United States.

-- Require the corporation to pay dividends on this stock unless there is an "overriding" need to retain earnings for corporate functions, such as research and development.

-- Require the corporation to report to the President within 5 years on the possible sale of the corporation to the private sector.

-- Authorize the corporation to borrow up to $2.5 billion from the private sector by issuing bonds that would not be guaranteed by the government.

-- Assign responsibility for deploying the next generation of uranium enrichment technology--the atomic vapor laser isotope separation (AVLIS) process--to the corporation.

-- Establish a fund to meet decontamination, decommissioning, and remedial action costs at enrichment plants.

-- Require the corporation to seek licenses from the Nuclear Regulatory Commission (NRC) for the existing plants and any new enrichment facilities.

GAO'S VIEWS ON THE PROPOSED LEGISLATION

We would like to discuss our views on several key issues embodied in H.R.2480: the appropriate organizational structure of the program; past unrecovered costs; the feasibility of privatization; future decontamination, decommissioning and environmental cleanup costs; and the clean up of mill tailing sites.

Future Structure of the Enrichment Program

DOE believes that the enrichment program should be restructured as a government corporation. Over the last several years, we have also recommended that the enrichment program be restructured as a government corporation. We believe that a government corporation could establish more flexible prices to stimulate demand among utilities, particularly those that have not renewed their contracts with DOE because they are waiting to see where the program is headed. Presently DOE is hampered by government processes that do not allow it to act quickly in a

competitive market. Further, DOE's ability to set flexible prices is limited by current law.

Past Unrecovered Costs

Total uranium enrichment program costs have not been recovered through revenues. Although the Atomic Energy Act requires the recovery of all government costs, we recognize that the existing program cannot expect to generate revenues sufficient to repay past unrecovered costs that we calculate to total about $9.9 billion at the end of fiscal year 1989. We note that this amount is not too different from Smith Barney's calculation of total past costs.[2] However, Smith Barney assumed that DOE could reduce total costs by making various write-offs and policy decisions and concluded that DOE's customers had overpaid the government by about $1.2 billion. However, DOE does not have the statutory authority to make these write-offs and policy decisions; only the Congress can do so.

Because annual imputed interest expense on past unrecovered costs is approaching $1 billion, we recognize that full cost recovery through revenues is not feasible. Therefore, we have encouraged the Congress to allow DOE to write off costs associated with unproductive program assets, such as the abandoned gas

[2]In January 1990, DOE entered into a contract with Smith Barney, Harris Upham and Co. Incorporated, to assess the feasibility of restructuring the enrichment program. Smith Barney delivered the report to DOE on May 15, 1990.

centrifuge facilities. This action, although requiring a change in existing legislation, follows generally accepted accounting principles and would provide a practical approach to help resolve the problem of unrecovered costs. DOE wrote off unproductive assets in 1984 and 1985 (without statutory authority), which left unrecovered costs at that time of about $3.4 billion. Since that time, DOE has repaid about $400 million to the Treasury and is now pricing its uranium enrichment services to recover about $3 billion over the next 12 years.

H.R.2480 would authorize the write-off of unproductive assets but does not set a specific cost recovery goal. DOE projects that the corporation would generate over $3 billion in net income by the year 2000 and over $8 billion by 2008. Although these projections do not include any investment in AVLIS (perhaps $1 billion or more) or any estimate of the amount of dividends to be paid on the government corporation's stock, they illustrate the considerable earning power remaining in the current production facilities.

Therefore, we believe that the Congress should set a specific repayment amount consistent with DOE's projections of the corporation's expected earnings over the next 10 to 15 years, rather than rely on the receipt of unspecified dividends and/or uncertain stock sales. On the basis of DOE's projections, we believe the repayment amount should be about $3 billion. We would also suggest that the Congress provide certain flexibility to the

corporation in meeting a specific cost recovery goal, such as suspending interest payments. Such measures may be needed to keep the corporation competitive if substantial investments are needed in new technology or environmental costs increase more than expected.

Feasibility of Privatization

We have several concerns about the prospects for privatization, which DOE believes would result in the federal government receiving the market value of its past investment. Let me just mention just a few:

-- Licensing: Before the enrichment corporation could be privatized, it would have to obtain a license for each of its operating plants from NRC. Because current law exempts DOE from obtaining an NRC license for its enrichment plants, no enrichment facility has ever been licensed in this country. Therefore, unforeseen licensing problems may exist since the two existing production facilities are 30 to 40 years old.

-- Environmental and decommissioning costs: These are largely undefined but could total billions of dollars. These costs would inhibit future private investment, unless the government's liability is clearly established. Smith

Barney reported that DOE's estimates for decommissioning the Oak Ridge plant alone could be as much as $8 billion, depending on the cleanup required. If we assume similar costs for the three existing plants, these costs could total $24 billion. Further, DOE has not completely identified or characterized enrichment plant waste sites, and past experience indicates that such costs increase as more information becomes available. In addition, inflation could significantly increase these costs.

-- Increasing competition: An oversupply of enrichment capacity exists worldwide, which will make the lucrative U.S. market a "battleground" for international suppliers as existing DOE contracts expire in the mid-1990s. In particular, DOE estimates that the Soviet Union has excess capacity of up to 9 million separative work units (a measure of the effort required to enrich uranium). The Soviet Union has recently dominated the enrichment market by selling its product for about 50 percent less than DOE's price. This excess capacity, coupled with domestic utilities' need to purchase enriched uranium at the lowest cost, leads DOE to expect that the Soviet Union will become more active in the U.S. market. Also, DOE reports that China is becoming much more aggressive in the U.S. enrichment marketplace. Finally, a for-profit consortium of three domestic utilities; URENCO (a European producer);

and Fluor-Daniel, Incorporated (a U.S. firm) has announced plans to build an enrichment plant in Louisiana, using the more cost-efficient gas centrifuge technology.

Decommissioning and
Environmental Cleanup Costs

We have long said the decommissioning costs should be paid by the beneficiaries of the services provided, in this case DOE's commercial and government customers. H.R.2480 would require the corporation to establish a fund for the eventual decontamination and decommissioning of all enrichment plants. It would also require the corporation and DOE (as provided by appropriations) to annually make matching payments to the fund, reflecting the fact that production over the life of the existing plants for both government and commercial customers has been about equal. The new corporation would be responsible for the cleanup costs at any new facility.

However, H.R.2480, in an attempt to separate past commercial and defense activities, would also require that cleanup costs be allocated between the government and the corporation on the basis of the time period in which the activity causing the contamination occurred. Unfortunately, cleanup costs at the enrichment sites are largely undefined, and available information does not exist to accurately allocate these costs. We believe that requiring equal contributions to the fund adequately reflects DOE's and the

corporation's responsibilities, and further attempts to allocate such costs will only lead to confusion and disputes between DOE and the corporation.

U.S. Uranium Industry

H.R.2480 would establish a program to help pay for cleaning up uranium process waste (mill tailings) sites resulting from past government contracts. The proposed bill would require the Secretary of Energy to reimburse responsible parties up to a certain dollar limit for cleanup costs associated with uranium sold to the government. Since 1979, we have said that the government should pay its share of the cleanup costs associated with the production of uranium under these contracts.[3]

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In summary, we believe that H.R.2480 takes needed steps toward establishing clear objectives for the enrichment program and would allow the new corporation to better operate as a business entity. H.R.2480 would also help resolve several long-term issues that, in our view, seriously challenge the program's future, including the need to pay billions of dollars in environmental and

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[3]Cleaning Up Commingled Uranium Mill Tailings: Is Federal Assistance Necessary? (EMD-79-29, Feb. 5, 1979).

decommissioning costs at a time when competition is expected to increase.

We have pointed out several specific concerns about the proposed legislation. In particular, we believe the proposed bill would be strengthened by including a specific cost recovery provision. Because DOE projects that the corporation's future earnings could be substantial, we suggest that the Congress require the repayment of $3 billion, rather than rely solely on unspecified dividends and/or uncertain future stock sales that may not materialize unless problems related to licensing uncertainties, increased competition, and billions of dollars in liabilities are adequately resolved.

We appreciate the opportunity to submit our views on H.R.2480 for the record and are willing to address follow-on questions that the Committee may have.

The CHAIRMAN. Having said that, the Chair recognizes the distinguished Chairman of the Subcommittee on Energy Research and Development, Hon. Marilyn Lloyd from Tennessee.

Mrs. LLOYD. Thank you very much, Mr. Chairman.

I do want to thank you for holding this hearing today. It is a very important issue. Regardless of the course that we take, we will be setting the policy for the uranium enrichment enterprise, so we will determine the success or the failure of this very critical energy operation.

As Chairman of the Energy Research and Development Subcommittee, I am pleased to report the bill to the full Committee. We have worked long and hard to craft a proposal which will address many of the controversial and the complicated issues regarding the Department of Energy's uranium enrichment enterprise. Certainly this is not a new idea. We have been dealing with this reorganization for many years now. We even chartered a Committee advisory panel to recommend a course for the future of this enterprise in 1983 and 1984. So it certainly disappoints me to say that Congress has not yet acted on these recommendations. Certainly it is not a simple matter.

The evolution of this program into an entity that we are dealing with today has been filled with decisions for defense, for foreign policy, for scientific advancements, and sometimes for business reasons. With all due respect to our Federal employees, operating a competitive business within a Federal bureaucracy, Mr. Chairman, is pretty difficult.

I think one thing that we need to remember today is that uranium enrichment restructuring is not a debate on nuclear energy. The nuclear power plants are built and they are operating, and they are going to require fuel. Utilities will buy this fuel. The question is: will it be domestically produced or will it be imported from Europe, the Soviet Union, or Japan and China?

So this is a very serious issue before the Committee today.

Certainly I believe in the legislation. I believe we must act now to restructure the business and make it business- like. I must repeat your comments, Mr. Chairman, that our window of opportunity for effective and positive change is beginning to close. The indications are clear, and I hope that we act before it is too late.

Mr. Chairman, I did mention the Tri-Committee Advisory Panel in my statement. Mr. Chairman, Mr. William Lee, Chairman and President of Butte Power Company, was the chairman of this panel. He couldn't be with us today after we changed the schedule, so I would like permission to have a letter from Mr. Lee entered into the record.

The CHAIRMAN. No objection, so ordered.

[The letter of Mr. William Lee follows:]

Duke Power Company
422 South Church Street
Charlotte, N.C. 28242

WILLIAM S. LEE
Chairman and President

DUKE POWER

October 9, 1990

FOR THE RECORD

The Honorable Marilyn Lloyd
U. S. House of Representatives
2452 Rayburn House Office Building
Washington, D. C. 20515

Dear Representative Lloyd:

Thank you for your invitation to testify before the Committee on Science, Space, and Technology on October 11, 1990 concerning the Department of Energy's Uranium Enrichment Enterprise. I regret that I will be unable to attend due to other commitments.

While I am heartened to see that you continue to work to assure the viability of the Department of Energy's Uranium Enrichment Enterprise, it is unfortunate your intentions are not shared by more of the Congress. Though I cannot attend the hearing, I would like to take this opportunity to share a few thoughts. I should point out that I am not necessarily speaking for the industry, but only for Duke Power.

Last year I had the privilege of testifying before your Subcommittee on Energy Research and Development hearing on H.R. 2480. One of the key points I made then was to reiterate the principal finding of the 1984 Tri-Committee Business Advisory Panel that was established to review the operation of DOE's Uranium Enrichment Enterprise:

- Congress and the Secretary of Energy should take steps to establish a private business management structure for the enrichment enterprise. Alternative institutional structures under Government ownership should be examined. The proper structure would further the business objectives of the enterprise and be compatible with an approach to privatization of enrichment services.

This is still clearly the path for the Uranium Enrichment Enterprise to take. Since last year, the Smith-Barney study provides yet another independent source advocating restructuring. They recommended establishing a government corporation.

Another point I made last year concerned the issue of "unrecovered government investment":

- Duke Power believes that when the structure of the new enrichment enterprise is defined, care must be exercised not to encumber the corporation with unreasonable or unreal debt. One reason customers have concerns about DOE as an enrichment supplier is the issue of "prior

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unrecovered government costs," that some groups have argued should be considered as a debt of the enrichment enterprise. Commercial customers have paid their full share of enrichment program costs; this we can demonstrate.

Again, I would point out that since last year the Smith-Barney study provides yet another source that calls for not unreasonably burdening the Uranium Enrichment Enterprise:

- Efforts to directly recover all or a significant portion of these "sunk costs" from the UEE's revenues, together with the proposed payback of "unrecovered government costs" are misdirected and ill-conceived in the context of historical objectives and future business requirements. A requirement to recover these costs would merely serve to create a debt burden and contingent liabilities that will make ongoing enrichment operations infeasible, whether under their current structure or restructured either within or outside the Government.

In fact, their work showed that if as little as one half of what they term "policy decisions" rather than business decisions are assigned to the government sector then the commercial sector has overpaid by $1.17 billion.

As you know, Duke has reduced its commitment to DOE and last year announced its participation in Louisiana Energy Services. The reason for this is simply good business. We have an obligation to our customers to provide a reliable supply of electricity at the lowest possible cost. We believe the best way to achieve this is through doing business with multiple domestic sources of supply. Thus, we are very much interested in seeing DOE as a competitive, viable supplier, and I urge Congress to take the appropriate restructuring actions.

Very truly yours,

W. S. Lee

WSL/pkh

Mrs. LLOYD. Thank you very much, Mr. Chairman.

The CHAIRMAN. The Chair recognizes the distinguished Ranking Member that is here at the moment, the Honorable Claudine Schneider from Rhode Island.

Miss SCHNEIDER. Thank you, Mr. Chairman.

I would like to welcome Deputy Secretary Mr. Moore. It is always a pleasure to see you, and we are enthused about your testimony. But insofar as today's hearing is concerned, I will say that this week the United States finds itself in the midst of two related crises: one is the looming budget deficit, the other is the shadow of war that is cast over a nation whose security is threatened. Why? Well, one reason is because we are lacking an energy policy.

These crises I believe form a very fitting backdrop for the subject of the hearing today. The test that we must set forth for any energy proposal is whether it is one that will help us solve our security problem without worsening the budgetary one. I believe our nation need not surrender to the dilemma that says we have to deplete ourselves economically in order to protect ourselves strategically. We have to insist that this energy proposal, like any other, not allow us this false tradeoff.

The potential cost to the taxpayer by this particular proposal is very high. This is what I believe this particular hearing needs to focus on—the cost.

The estimates from the National Taxpayers Union, including a report released this morning, indicate that there are already about $10 billion in unrecovered costs of production associated with the uranium enrichment program. This proposal that we will be talking about today would, in effect, forgive this debt that should have been collected from the utilities.

Now, the question that I have—and we'll eventually get into it—is that if we have a business agreement with the government and the industry and they are to pay for the cost of production, but yet we, as a government, are being asked to forgive a $10 billion debt and let the taxpayers pay for it, is this not a failed business agreement as opposed to being run like a good business? Why weren't the funds in the past set aside for the inevitable decommissioning and decontamination? Was there no vision? No foresight? No planning for the future?

The Department of Energy places some of the costs that we can anticipate from this between $1 billion to $2 billion per facility. The Smith Barney report says that the Oak Ridge plant, alone, would cost $8 billion. So the proposal would set aside money for shutdown and cleanup costs. It could only be made available from an uncertain revenue stream.

The basic question that I would like to learn today is where are we going to get the money. Finally, the proposal grants the newly-created corporation $2.5 billion in borrowing authority. If the Corporation performs poorly, this would be another loss to the U.S. Treasury. Altogether, these costs could well run into the $20 or $30 billion range—a very stiff price tag for an industry that faces stagnant demand, as was already pointed out, and excess supply worldwide.

The question we have to continue to ask ourselves as we listen to the testimony here today is: do we need it? And can we afford it?

Are we looking at yet another taxpayer's bailout? Are we yet again going to the taxpayer and saying, "All right. Here is a business failure. We want you to foot the bill."? I believe that the taxpayers deserve the answers to these questions.

Thank you very much, Mr. Chairman.

[The prepared statement of Miss Schneider follows:]

STATEMENT OF THE HONORABLE CLAUDINE SCHNEIDER
HEARING ON THE URANIUM ENRICHMENT REORAGNIZATION ACT (H.R. 2480)
SCIENCE, SPACE AND TECHNOLOGY COMMITTEE
OCTOBER 11, 1990

THIS WEEK THE U.S. FINDS ITSELF IN THE MIDST OF TWO RELATED CRISES. ONE IS THE LOOMING BUDGET DEFICIT THAT CONGRESS CAN NO LONGER AVOID. THE OTHER IS THE SHADOW OF WAR CAST OVER A NATION WHOSE SECURITY IS THREATENED FOR LACK OF AN ENERGY POLICY. THESE CRISES FORM A FITTING BACKDROP FOR THE SUBJECT OF THE HEARING TODAY.

THE TEST WE MUST SET FORTH FOR ANY ENERGY PROPOSAL IS WHETHER IT IS ONE THAT WILL HELP US SOLVE OUR SECURITY PROBLEM WITHOUT WORSENING THE BUDGETARY ONE. INDEED, I BELIEVE OUR NATION NEED NOT SURRENDER TO THE DILEMMA THAT SAYS WE MUST DEPLETE OURSELVES ECONOMICALLY TO PROTECT OURSELVES STRATEGICALLY. SAFE, AFFORDABLE OPTIONS SUCH AS CONSERVATION AND RENEWABLES ARE READILY AVAILABLE AND SHOULD BE USED TO THE FULLEST.

THEREFORE, WE MUST INSIST THAT THIS ENERGY PROPOSAL, LIKE ANY OTHER, PASS THIS TWO-FOLD TEST AND NOT THRUST US BACK INTO ACCEPTING A FALSE TRADE-OFF.

ONE UNAVOIDABLE FACT IS THAT THE POTENTIAL COST TO THE TAXPAYER OF THIS PROPOSAL IS HIGH. ESTIMATES FROM THE NATIONAL TAXPAYER'S UNION, INCLUDING A REPORT RELEASED THIS MORNING, INDICATE THAT THERE ARE ALREADY ABOUT $10 BILLION IN UNRECOVERED COSTS OF PRODUCTION ASSOCIATED WITH THE URANIUM ENRICHMENT PROGRAM. THIS PROPOSAL WOULD IN EFFECT FORGIVE THIS DEBT, THAT SHOULD HAVE BEEN COLLECTED FROM THE UTILITIES, AND FORGET THE LOSS TO THE U.S. TREASURY.

IN ADDITION, FUNDS IN THE PAST HAVE NOT BEEN SET ASIDE FOR THE INEVITABLE DECOMMISSIONING AND DECONTAMINATION COSTS OF THESE FACILITIES. ALTHOUGH DOE PLACES THESE COSTS AROUND $1-2 BILLION PER FACILITY, THE SMITH BARNEY REPORT SAYS THE OAK RIDGE PLANT ALONE WOULD COST $8 BILLION. ALTHOUGH THE PROPOSAL WOULD SET ASIDE MONEY FOR SHUTDOWN AND CLEANUP COSTS, IT COULD ONLY BE MADE AVAILABLE FROM AN UNCERTAIN REVENUE STREAM.

FINALLY, THE PROPOSAL GRANTS THE NEWLY CREATED CORPORATION $2.5 BILLION IN BORROWING AUTHORITY SECURED BY URANIUM ENRICHMENT ASSETS THE GOVERNMENT CURRENTLY OWNS. SHOULD THE CORPORATION PERFORM POORLY, THIS WOULD BE ANOTHER LOSS TO THE U.S. TREASURY.

ALTOGETHER, THESE COSTS COULD WELL RUN INTO THE $20-30 BILLION RANGE -- A STIFF PRICE TAG FOR AN INDUSTRY THAT FACES STAGNANT DEMAND AND EXCESS SUPPLY WORLDWIDE. THE QUESTION WE MUST CONTINUE TO ASK OURSELVES AS WE LISTEN TO THE TESTIMONY TODAY IS: "DO WE NEED IT AND CAN WE AFFORD IT?" THE TAXPAYERS DESERVE THE RIGHT ANSWER.

The CHAIRMAN. I thank the distinguished lady.

The Chair wants to next recognize the distinguished gentleman from the State of Washington who is the Ranking Member on the Subcommittee and perhaps one of the most knowledgeable people in the Congress on this very issue and who has done a great deal of work to help bring this matter into clear focus for the Congress, the gentleman from Washington, Mr. Sid Morrison.

Mr. MORRISON. Thank you, Mr. Chairman, for those very kind comments.

I would first ask, Mr. Chairman, that I be allowed to submit for the record both my own formal opening statement and that of our Ranking Member, Bob Walker, who I believe is down at the White House demanding a recorded vote, or something.

[Laughter.]

Mr. MORRISON. Mr. Chairman, I would add to the comments only to say that your Subcommittee, under the leadership of Mrs. Lloyd, I think has been very aggressive, as well as accurate, in this issue area of uranium fuels. We have taken various steps with the support of this full Committee through the years to keep the system competitive, but right now we need a major overhaul. It is brought to us by the Department of Energy. We need greater flexibility. We've got to face up to some of the old debts that have already been mentioned. I pay tribute to Henson Moore and the team at the Department of Energy. I think this is a proper procedure. The Smith Barney investigation sheds some interesting private enterprise light on this whole question.

We are going to need nuclear power for the future. I do not find a responsible organization who does not admit that with global warming and clean air and the need for an indigenous source of energy. Of course, we already have 20 percent of our electrical energy provided that way and a marvelous record of safety.

We also need to evaluate the past and how we got where we are. Let's remember we started with all Defense as far as enrichment was concerned. Then, as the nuclear power sources developed, we mixed commercial purposes with Defense. And, very frankly, part of that old debt that is there is part of the Defense cost of this Nation.

For the future, the reason we need reorganization and a totally new process is we are facing a highly-competitive commercial market worldwide. I think, again, the Department brings to us a very realistic proposal and the direction that we should go.

We also, from the Subcommittee, bring to you new technology. AVLIS is exciting—Atomic Vapor Laser Isotope Separation. That's why we call it AVLIS. I think you will find that it has tremendous potential. The best way to develop this is a blend of private investment, utility investment, along with taxpayer investment in making America again the energy leader of the world in this category.

So, Mr. Chairman, I am delighted that you are holding this hearing so other Members of the full Committee can become aware of the opportunities, the challenges, and even the negatives of this particular effort. I thank you for this change to make a statement.

[The prepared statements of Mr. Morrison and Mr. Walker follow:]

OPENING STATEMENT
HON. SID MORRISON (R-WA)
HEARING ON H.R. 2480-URANIUM ENRICHMENT
OCTOBER 11, 1990

Good Morning. Today we will re-visit the subject of uranium enrichment in the form of H.R. 2480, the Uranium Enrichment Reorganization Act. As Ranking Member of the Energy Research and Development Subcommittee I have been following the adventures of the U.S. Uranium Enrichment Enterprise for a number of years. I for one am convinced that the federal uranium enrichment business is unlikely to survive far into the future without reorganization.

The Smith Barney report, which we will hear more about today, also recommends a re-organization that more closely mirrors private enterprise. The report repeatedly points to situations where the flexibility and motivations of a private enterprise would have allowed for better decision making by the Uranium Enrichment Enterprise. The decision to pursue GCEP is one example noted in the report. I agree that we need to take the first step in the direction of privatization. I think H.R. 2480 takes us in the right direction by creating a government corporation.

I look forward to today's discussion and future action on this legislation.

FOR THE RECORD

THE HONORABLE ROBERT S. WALKER

FULL COMMITTEE HEARING

URANIUM ENRICHMENT

OCTOBER 11, 1990

THANK YOU, MR. CHAIRMAN.

THERE HAS BEEN A LOT OF CONTROVERSY SURROUNDING THE NATURE OF THIS HEARING. IN JULY, I WAS APPROACHED BY SEVERAL MEMBERS ON THEIR CONCERNS ABOUT H.R. 2480. I FELT RECOMMENDING A FULL COMMITTEE HEARING WAS THE PROPER APPROACH PRIOR TO A FULL COMMITTEE MARKUP GIVEN THE COMPLEXITIES OF ESTABLISHING A URANIUM ENRICHMENT ENTERPRISE.

I WANT TO COMMEND MRS. LLOYD FOR HER DILIGENT EFFORTS ON H.R. 2480. I KNOW SHE IS WORKING CLOSELY WITH THE ADMINISTRATION, MY STAFF AND OTHER ORGANIZATIONS, ON FINDING AN AGREEABLE PIECE OF LEGISLATION THAT WILL BEST SERVE THE TAXPAYER. ALTHOUGH WE MAY STILL HAVE SOME DIFFERENCES, I BELIEVE WE CAN WORK TOGETHER TO FASHION A BILL WHICH WILL BOTH GIVE THE NEW GOVERNMENT CORPORATION MAXIMUM FLEXIBILITY WHILE PROTECTING THE INTERESTS OF THE TAXPAYERS AS TO THE EXTENT OF THEIR FUTURE LIABILITY UNDER

THIS BILL.

ONCE HOLDING A 100% OF THE COMMERCIAL MARKET SHARE OF THE FREE WORLD'S ENRICHED URANIUM, WE HAVE FALLEN BELOW 45% IN TODAY'S MARKET. IN FACT, THE SOVIET UNION JUST SIGNED A $250 MILLION DOLLAR DEAL WITH FOUR U.S. UTILITIES TO SUPPLY THEIR URANIUM ENRICHMENT NEEDS. THERE ARE MANY REASONS WHY UTILITIES TAKE THIS ACTION - BUT THE BOTTOM LINE IS - THE UNITED STATES NEEDS TO RETHINK ITS MARKET STRATEGY IN ORDER TO BE COMPETITIVE IN SELLING ITS URANIUM ENRICHMENT SERVICES IN THE WORLD MARKET.

THE PROPOSED RESTRUCTURING MAY FREE THE ENRICHMENT ENTERPRISE FROM BUREAUCRATIC AND POLITICAL CONTROLS THAT HAVE ALLEGEDLY HINDERED ITS ABILITY TO COMPETE IN THE WORLD MARKET. THIS ACTION WOULD POTENTIALLY ALLOW THE ENRICHMENT ENTERPRISE TO PRODUCE GREATER LONG-TERM RETURNS TO THE TREASURY.

FURTHERMORE, I KNOW THERE ARE MANY CONCERNS BY MEMBERS AND ORGANIZATIONS APPEARING HERE TODAY ON THE QUESTION OF UNRECOVERED COSTS, FUNDING OF AVLIS, DECONTAMINATION AND DECOMMISSION COSTS, AS WELL AS OVER CAPACITY IN THE WORLD MARKET. GIVEN THESE FACTORS, CAN THE URANIUM ENTERPRISE MAKE A PROFIT? I LOOK FORWARD TO HEARING FROM OUR

DISTINGUISHED WITNESSES WHO WILL PROVIDE SOME INSIGHT AS TO THESE AND OTHER QUESTIONS.

THANK YOU MR. CHAIRMAN.

The CHAIRMAN. I thank the distinguished gentleman from Washington.

Is there anybody that has any further opening statements?

The gentleman, Mr. Wolpe, is recognized.

Mr. WOLPE. Thank you very much, Mr. Chairman.

I want to express my personal appreciation to you for convening today's hearing on the Department of Energy's uranium enrichment enterprise. During this Congress, the Subcommittee on Energy, Research, and Development has held several hearings, as it has indicated, regarding this program. I believe that these hearings have produced a number of questions to which we have yet to receive good answers. And so I think it is very important that this kind of hearing take place in advance of any serious markup.

Few would argue that the current program is not in drastic need of reform and reorganization. It has been losing extraordinary sums of money. It has been managed ineptly. And although it is legally required to recover costs, and has been for many years, unrecovered costs now loom in excess of $10 billion. I want to emphasize that's, in my judgment, in clear violation of law.

GAO has stated as clearly as can be that, "In reality, total costs have not been recovered through revenues but reduced by certain adjustments and policy decisions which we believe should only be made by the Congress."

The Atomic Energy Act was very clear in the cost recovery question, and it has simply been ignored.

However, much has been changed since the United States began to enrich uranium for the civilian sector. In 1969 the United States was the sole supplier of enriched uranium to the American utility industry. Today, however, our government faces competition from subsidized foreign competitors, and there is now a diminishing worldwide demand for the product. Some ask why the United States government does not just cut its losses, salvage what it can of the current debacle, and get out of the business entirely.

We all know that under current law the Federal uranium enrichment program is supposed to recover all costs, including depreciation and return on investment from its customers, the utility industry. Unfortunately, the tragic reality is that the American taxpayer is footing that bill.

I think the real question that we need to ask ourselves as we move through the consideration of this question is precisely how much risk should be borne by the taxpayer and how much should properly be borne by the industry.

According to the GAO, as of the end of 1988 maybe $10 billion is involved here in unrecovered program costs. Additionally, GAO estimates that the Department of Energy has declined to set aside funds to decommission the three existing uranium enrichment plants, a process which could cost an additional $4 to $6 billion.

I'm hoping that today DOE and Smith Barney can shed some light on their figures which suggest, if I understand their claim, not that there has been under-recovery, but that there has been a $1.17 billion over-recovery. Again, that figure contrasts dramatically with the GAO finding.

Second, if it is true, as I believe it is, that decommissioning expenses for DOE's three uranium enrichment plants are legitimate-

ly part of the cost of providing civilian uranium enrichment services, then why is the Smith Barney report recommending that the taxpayer rather than the customer bear all of the decommissioning expenses?

Finally, given the enormous unrecouped billions of dollars the American taxpayer has already pumped into uranium enrichment facilities, how on earth can we now have a recommendation before us that the taxpayer now finance a huge AVLIS plant?

The question here is: who should pay for the next generation of enrichment technology? There is currently no forecast for a marked increase in demand for uranium enrichment services. The United States does not require any new capacity to serve all foreseeable domestic needs. The AVLIS plant would represent very likely excess capacity and would be selling into a glutted market. This renders investment in such a plant extremely risky. Moreover, the technology is untried. Yet, again, the American taxpayer is being asked to basically assume all of the downside risks.

I look forward to hearing from our witnesses. I thank you for the opportunity to make these opening remarks, Mr. Chairman.

The CHAIRMAN. I thank the distinguished gentleman.

The Chair recognizes the distinguished gentlelady from Maryland, Mrs. Morella.

Mrs. MORELLA. Thank you, Mr. Chairman. Thank you.

I appreciate, Mr. Chairman, your scheduling this hearing on the Uranium Enrichment Reorganization Act.

As you know, I and several of my colleagues had requested a full Committee hearing to air some of the concerns involved in this very complex issue, and I'm grateful that today we'll have the opportunity to hear the many facets of the issue. And I want to congratulate the chairman of the Subcommittee, Ranking Member, also, for the work that went into this bill.

The purpose of the Uranium Enrichment Reorganization Act, H.R. 2480, is to restructure and reorganize the Federal Government's enrichment enterprise. I'd like to support the legislation.

The Maryland People's Council, an independent agency of the State of Maryland which represents the interests of residential consumers, does support this bill. The People's Council believes that since the restructuring of the uranium enrichment enterprise would make uranium fuel more cost- competitive, it would probably lead to a savings that would benefit Maryland taxpayers or ratepayers—who are also taxpayers.

I do have some concerns, however, that I know will be addressed today by the witnesses, which is why I particularly welcome this hearing.

If the quasi-government corporation fails, what would be the taxpayers' liability? If this legislation does not become law, are we asking taxpayers to pay the unnecessarily large bill for military enrichment services? Would this restructuring assist the United States enrichment market to remain competitive? Where are the future markets for the U.S. uranium enrichment business and how great is the problem of overcapacity?

Mr. Chairman, I look forward to hearing from the witnesses—very prominent array of them here, headed by Secretary Moore—

and to resolving some of these issues. Again, I thank you for scheduling this hearing of the committee.

[The prepared statement of Mrs. Morella follows:]

THE URANIUM ENRICHMENT REORGANIZATION ACT

HON. CONSTANCE A. MORELLA

OCTOBER 11, 1990

Mr. Chairman, I appreciate your scheduling this hearing on the Uranium Enrichment Reorganization Act. I and several of my colleagues had requested a full committee hearing to air some of the concerns involved in this complex issue, and I am grateful that today we will have the opportunity to hear the many ~~sides~~ facets of the issue.

The purpose of the Uranium Enrichment Reorganization Act, H.R. 2480, is to restructure and reorganize the federal government's enrichment enterprise. I would like to support this legislation. The Maryland People's Counsel, an independent agency of the State of Maryland which represents the interests of residential consumers, does support this bill. The People's Counsel believes that since the restructuring of the Uranium Enrichment Enterprise would make uranium fuel more cost competitive, it would probably lead to a savings which would benefit Maryland ratepayers.

I have some concerns, however, that I know will be addressed today by the witnesses. If the quasi-government corporation fails, what would be the taxpayers' liability? If this legislation does not become law, are we asking taxpayers to pay an unnecessarily large bill for military enrichment services? Would this restructuring assist the U.S. enrichment market to remain competitive? Where are the future markets for the U.S. Uranium Enrichment business? How great is the problem of overcapacity?

Mr. Chairman, I look forward to hearing from today's witnesses, and to resolving some of these issues. Once again, thank you for scheduling this hearing at this busy time of the year, and I thank the witnesses for their time and expertise.

The CHAIRMAN. I thank the distinguished gentlelady.

The gentleman from New Mexico—

Mr. SCHIFF. Thank you, Mr. Chairman.

I'll be extremely brief. I just wanted to say—

The CHAIRMAN.—Mr. Schiff. As a Member of the Subcommittee, I wanted to thank you as chairman of the full Committee for holding this hearing. I recognize on this bill that there are many legitimate questions which still must be discussed, as just mentioned in part by my colleague from Maryland. But I think that this hearing and this bill represents a recognition that we do have to move forward to make the United States energy independent, that what happened in 1973 we came to believe was a fluke. It was not a fluke. It can happen at any time. An interruption in our oil supplies—they've happened again, and they can happen again and again and again in the future. I think it is a very important step, Mr. Chairman, for you to hold this hearing and move this legislation forward.

Thank you.

The CHAIRMAN. I thank the distinguished gentleman.

The Chair recognizes the distinguished gentleman from California, Mr. Campbell.

Mr. CAMPBELL. Thank you, Mr. Chairman.

I'll be brief. I simply wish to welcome our witness, Secretary Moore, and to say that I have had occasion to work with him and to have the highest regard for his ability and intellect, and I'm very pleased he is in the position he is and testifying before us this morning.

Thank you, Mr. Chairman.

The CHAIRMAN. Any further opening comments?

Mr. COSTELLO. I'd like to include mine in the record, Mr. Chairman.

The CHAIRMAN. The gentleman from Illinois wishes to place his statement in the record.

All those in favor signify by saying aye.

[Chorus of ayes.]

The CHAIRMAN. No objection, so ordered.

[The prepared statement of Mr. Costello follows:]

OPENING STATEMENT

BY U.S. REP. JERRY COSTELLO, ILLINOIS

COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY

OCTOBER 11, 1990

URANIUM ENRICHMENT REORGANIZATION ACT H.R. 2480

Mr. Chairman, this hearing will focus on whether it is feasible or not to convert the Uranium enterprise to a government corporation. The Uranium Enrichment Enterprise is owned by the Federal government and managed by DOE through its contractor. In the 1960's, the government determined that for national security reasons uranium enrichment technology should be held by the government.

I am pleased that the Chairman has decided to conduct a Full Committee hearing on this issue. Many members have questions on the fiscal responsibility of converting the enterprise into a government owned corporation.

I look forward to hearing from our DOE witness on how they plan to implement the recommendation of the Smith Barney Report if 2480 is passed.

Mr. Chairman, I thank you for your time in this matter.

The CHAIRMAN. You got both the "no objection, so ordered" and a vote on that. Not too bad.

[Laughter.]

The CHAIRMAN. Well, I guess we've had all of our opening comments.

The Chair wants to recognize our first witness this morning, which is the Honorable Henson Moore, from the great State of Louisiana, and Deputy Secretary of the Department of Energy, who was our distinguished colleague well regarded and highly respected for his leadership not only in the Congress, but in the Executive Branch.

Having said that, I don't know whether that will get us the AVLIS plant or not. Nevertheless, I wanted to give you a warm, friendly welcome. We have great regard and respect for you.

STATEMENT OF HON. W. HENSON MOORE, DEPUTY SECRETARY, U.S. DEPARTMENT OF ENERGY, WASHINGTON, D.C.

Mr. MOORE. Thank you, Mr. Chairman. I do feel welcome, and appreciate that introduction.

I, too, want to thank the gentlelady from Tennessee, the Chairman of the Subcommittee, who has very diligently explored this legislation and moved it forward to the point where we have it today; and, likewise, her ranking Republican member, the gentleman from Washington, Mr. Morrison. We thank them for their work and effort, as this certainly isn't the kind of glamorous legislation that gets one votes. The fact that the committee takes the time and the subcommittee to work on it is a testament to how serious this committee treats the business of the country.

The CHAIRMAN. And one of the outstanding committees of the Congress, of course.

Mr. MOORE. I would have to agree.

[Laughter.]

Mr. MOORE. Mr. Chairman, I thank you for taking the time in the closing hours of the Congress when things are extremely busy and hectic to hold this hearing so that we can discuss these issues. We certainly would hope that it is possible for a mark-up to occur in this full committee before the termination of this Congress.

I'd like to make five points briefly, and then I'll assume that all of the questions and comments made in the opening remarks by the members of the committee we'll address in terms of questions rather than my trying to accomplish all of that in the very beginning.

The first point I would make is that uranium enrichment is an important enterprise to the United States. It is one that has been steadily supported from the Congress, going back prior to 1969.

From this enterprise we receive the fuel that fuels 40 percent of the Navy's principal combat ships. We receive the fuel that generates 20 percent of the Nation's electricity. It would seem to me and the United States Senate and to your subcommittee and many others that it is unacceptable from the point of view of a national energy strategy that we simply get out of this business and we allow all of the fuel to be imported, which would be the case at this very moment if we close down the operations tomorrow. We'll have

imported fuel for our Navy and imported fuel for all of our nuclear reactors in the civilian sector.

It wouldn't be good for the balance of trade, as obviously we would be increasing imports, thereby increasing our trade deficit. It certainly is not good from national security reasons, and I do not believe that Congress would go along with the idea of having our nuclear Navy depend upon a foreign country for its fuel, which means you then operate this strictly as a military proposition at greater cost to the taxpayers.

The second point I would make is that we have a problem or we would not be bothering you with this legislation. The problem is in the 1970s we dominated the market. We had 100 percent of the world market of uranium enrichment services. We did it all. There was no competition.

A bad decision was made—a decision not to expand capacity as additional nuclear reactors were brought on around the world, and so the predictable thing happened: other people got into the business. And so now, today, we have competition that we didn't have.

As you remarked in your opening comments, our share of that world market has steadily declined, is declining, and will continue to decline, if we do nothing to try to turn this around.

We believe that putting this—privatizing this, putting it into a private enterprise eventually, is the best way to run a business, rather than trying to do it through the government. There are a number of things we can discuss on questions about why that is, but basically you have more flexibility in the running of it, more flexibility in your financing of it, more flexibility in the pricing and the sale of your product, and you're able to meet competition which is privately owned.

The third point I would make is that we do believe we have a solution—one that is not unique to this Administration. It came up in the last one, and was approved by the United States Senate. We never got as far as we have gotten this morning in this committee in the House for one reason or another, but now, through the leadership of Mrs. Lloyd and Mr. Morrison and yourself, we are now further than we have arrived before in the House. But the Senate has twice before passed this legislation because they have agreed upon its need.

The simple situation is to put it into a quasi-government private corporation for about four or five years and have it operate, have it begin to establish itself with a private business record, and then have it sold to investors. The feeling now is we certainly would go along with the idea of just skipping a government corporation and selling it tomorrow to the private sector, except we are concerned about what the taxpayer gets back for this. If we were to do that tomorrow, it would not get the return on its money that we think the taxpayers should get. As the business does not have a private business operating record, we don't believe you'd get near the price you should at this particular point.

Smith Barney and the United States Senate agree with that conclusion.

And so we do have before you essentially legislation that privatizes by going through a government-owned corporation as a first step—privatizes what is, in effect, a business, and gets it out of the

government into hands that can operate it, we believe, more effectively and more efficiently.

The fourth point I would make is that we brought Smith Barney into this. It was suggested to us that we really ought to have somebody that knows the business world besides those of us in the political world to look at this proposition. Does it really have a chance of succeeding, or is this some sort of pipe dream we have dreamed up politically to simply get it out of our department, off our hands, and let somebody else worry about it? And so we did what had not been done before: we retained the services of Smith Barney and said, "You study this," as they did Conrail, "and you tell us will this work." The Smith Barney report is something that we had no control over; we didn't know how it was going to turn out until we received the final report.

We're pleased with the final report—certainly it differs with some conclusions and some assumptions we have made, but the bottom line is they fully agree the best way to ever get anything out of this is to have it go into a government-owned corporation and eventually a privately-owned corporation. So they fully agree with the basic conclusion that is the fundamental thesis of the legislation before you.

We took a real risk. Smith Barney could have come back and said "This is the craziest idea we have ever heard of. It is not going to work. It is a private business. Forget it." And we would have been hung with that, and that would have been that. We took that risk because we wanted to know, just like I assume each Member of this Committee and each Member of the House and Senate wants to know, is this going to work. They simply indicated that yes, it can work, just as Conrail can work. And they did the same work on that proposition. That's one of the reasons why we selected them to do this study, because they have had experience in privatization of government operations.

The final point I would make is—that I will touch on just briefly—about the unrecovered cost. We'll get into that, I'm sure today, as we have in the other four hearings I have testified in this Congress before on this issue. I'll be happy to. There is no hidden agenda. There are no hidden numbers. There is nothing here that we can't discuss logically and give you the numbers to think through.

But let me make one point. What difference does it all really make? If we decide the taxpayers should get $3 billion, which is the Department of Energy's position, or nothing, which is Smith Barney's position, or $10 billion, which is theoretically the position of Taxpayers Union, what difference does it make? What you are going to get is what you can sell it for, and the profit you can make in dividends until you sell it. It makes no difference what price you put on something; it is what you are going to get for it in the marketplace that tells you what return you get on the investment.

And so we simply say if you look at the alternatives, if the alternative is to continue to run this as a government enterprise we will run it into the ground because we cannot compete ultimately with private corporations, with private businesses. We'll start losing money as our long-term contracts play out and nobody is renewing those contracts, they're buying on the spot market, which is less

money than we are charging under long-term fixed contracts to people we are selling to now. So eventually what you do is simply run out of your contracts, you begin to try to compete in the spot market as best you can, you begin to lose ground, and if you get to the point where you lose all your commercial customers, then this becomes worth zero to the taxpayer. Who is going to buy something you can't sell? And then you operate it for the government to create fuel for the nuclear Navy at a cost we calculate of $300 million a year to the taxpayer and you get nothing back. You just have to appropriate $300 million a year for every year we have a nuclear Navy or until you make the decision that you'd rather buy the fuel elsewhere, which I think is doubtful, and you wind up with the taxpayer getting back nothing.

If you close it down tomorrow, as has been suggested, you get back nothing. How can you sell something that you're going to simply close down? The scrap value would be minimal.

So the only way the taxpayer is going to get anything out of this is to continue operating this as a business but move it into the business sector, have it continue to make a profit as it has for the last five or six years. You get a dividend back to the taxpayer. When you have established a track record, you then sell it to investors in this country, and then the money that you get from that sale you put back into the treasury. That's how you maximize your return and the only way we see the taxpayer is ever going to collect anything from this venture.

So I'd conclude by simply saying that we have a problem. We believe we have legislation. We're more than willing to work with this committee, if there are facets of it you don't like, to perfect. We believe the legislation is essential. The problem is not getting better—it is getting worse. And we would urge that you would approve the legislation in this Congress. We might not be able to get it through the House all the way this Congress, but at least let's get it through this committee if we can this Congress. And if we can't finish it this year, we'll proceed to be in a much better position next year to pick up where we left off and get it through the Congress early next year.

With that, Mr. Chairman, I'll be happy to try to answer questions.

[The prepared statement of Mr. Moore follows:]

STATEMENT OF

W. HENSON MOORE

DEPUTY SECRETARY OF ENERGY

BEFORE THE

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

U.S. HOUSE OF REPRESENTATIVES

OCTOBER 11, 1990

Mr. Chairman, I am pleased to be here today to discuss recent developments in the Department of Energy's (DOE) uranium enrichment program, including the recently completed report prepared by Smith Barney, Harris Upham & Company, Incorporated. A copy of the complete report has been provided to the members of the Committee, and with your permission, I would like to submit the Executive Summary along with the abridged version, which has had the proprietary and business sensitive data removed, for the record.

Successive Administrations and Congresses have reaffirmed that the uranium enrichment enterprise is vital to the national and energy security of the United States. The uranium enriched at our facilities fuels 40 percent of the Navy's principal combat ships. Enriched uranium provides the fuel for nuclear plants that generate 20 percent of the Nation's electricity--electricity generated without "greenhouse gas" emissions and acid rain precursors. Producing this electricity with fossil fuels could introduce an additional six million tons of SO2 into the atmosphere each year. These nuclear plants also displace the equivalent of 2.2 million barrels of oil per day. This would be equivalent to about 600 additional large oil tankers (200,000 dead weight tons) per year entering our shores and an increase in our trade deficit of $17 billion per year (assuming $21/bbl oil). On the other hand, foreign purchases of U.S. enrichment services currently reduce the trade deficit by $500 million annually. In addition, involvement in the international nuclear fuel cycle strengthens our voice in nonproliferation issues. The question, then, is not <u>whether</u> this important business activity should be sustained, but rather <u>how</u> it should be managed to best serve the Nation.

The sole supplier of enrichment services worldwide in the 1970s, DOE now furnishes less than half the world's total demand. With a supply glut resulting from the introduction of new suppliers and a secondary market, the enrichment environment has become highly competitive. And because providing commercial services for a fee is an atypical Government function and because we are not structured as a commercial business, we are unable to function with the freedom and flexibility our customers expect. In the future, if forced by non-commercial considerations to price enrichment services higher than the market will bear, the U.S. enrichment enterprise could lose the nearly $5 billion in sales at stake during the post-1995 time period. This could conceivably result in the loss of all our customers except the Government, which would then be forced to absorb the entire cost of the enterprise. Thus, the taxpayers would have to support the entire cost of the operation and infrastructure, pay a higher price for defense enrichment services, bear the entire cost of environmental restoration and of decontamination and decommissioning of retired facilities--and be dependent on foreign sources of enriched uranium for a substantial portion of the country's electric power needs.

Conversely, a corporation that is properly structured could adapt to and succeed in the marketplace. It could institute management, financial, and operational efficiencies to assure competitive prices. It could be more flexible with respect to marketing, contracting and administration. It could generate a substantial positive cash flow by the end of the century, and could support itself, including the eventual decontamination and decommissioning of existing facilities. The

taxpayer would pay less for defense needs, have a secure, domestic source of enriched uranium for electric power, and see the trade deficit reduced through the export of enrichment services.

In addition, a corporation would have more flexibility to make sound business decisions in the area of technology development. In the field of advanced technology, DOE currently has a commanding lead over its competitors with its research on the Atomic Vapor Laser Isotope Separation (AVLIS) process. AVLIS has the potential to enrich uranium at a cost about half that of the gaseous diffusion process and at a lower cost than the centrifuge process employed by competitors. However, to realize these benefits, additional investments will be needed. An independent government corporation would be better able to assess the costs and benefits of this technology and to make these investment decisions based on the needs of the business and market conditions.

Also, a Government corporation could demonstrate the commercial attractiveness of the business, increasing its real value. This would be a major step toward the ultimate goal of transferring ownership of the enrichment enterprise to the private sector.

Finally, we believe that the best way to maximize the return on investment to the taxpayer is through the establishment of a Government corporation with the potential for the payment of dividends to the Treasury. In the future, a sale of stock or assets of the corporation could achieve an even higher return.

While we at DOE have believed strongly for some time that restructuring into a government corporation is the proper path for the enterprise to take, we wanted the independent, objective assessment of a financial expert. In January of this year, DOE hired the investment firm of Smith Barney, Harris Upham & Co., Inc. to evaluate the enterprise's future financial potential and to provide recommendations regarding possible restructuring alternatives.

We were fortunate that a company of Smith Barney's caliber was available to provide this independent (and I would like to stress the word independent) assessment. Frank Zarb, Smith Barney's Chairman, has enormous experience with Government entities that have adopted various characteristics of private industry, most notably Conrail. Based on our knowledge of Mr. Zarb and of Smith Barney, we knew that we would receive a thorough, first-rate evaluation of the utmost integrity and objectivity. We were not disappointed.

The comprehensive report submitted to DOE in May contains several important findings and recommendations, most of which DOE supports. I would like to briefly address three that I consider to be most important.

KEY FINDINGS AND RECOMMENDATIONS

Maximizing Value to the Treasury

Smith Barney's most noteworthy conclusion is that the best way to maximize the value of DOE's uranium enrichment operations to the U.S. Treasury is to establish a true business enterprise in the private sector. However, the report states that immediate transfer to the private sector is not feasible today because of the current

organizational structure, unknown contingent liabilities, the absence of clear regulatory requirements for existing and new technology, lack of a commercial track record, and uncertainties associated with the evolving short-term market. As a result, Smith Barney recommends, as a first step, transferring the enterprise to a newly-created Government corporation.

DOE supports this conclusion. It is fully consistent with the Administration's proposed legislation to restructure the uranium enrichment enterprise.

Unrecovered Costs

In their May 15 report, Smith Barney estimated the uranium enrichment enterprise's unrecovered cost as of September 30, 1989, at $4.5 billion, without factoring in Government policy costs (referred to as "write-offs" by DOE). DOE's figure of $3 billion includes write-offs of some of these policy costs. Table 1 highlights the treatment of unrecovered costs. Smith Barney initially declined to take a position on how these Government policy costs should be handled. In response to requests by members of Congress and the Department, Smith Barney provided additional analysis on June 15 that factored in these policy costs. Based on available precedents, Smith Barney concluded that it would be appropriate to write-off nearly $5.7 billion, or 50 percent of Government policy costs. (DOE computed these as $4.1 billion.) Therefore, they stated that they "believe there is no unrecovered cost, and, in fact, there has been an over-recovery of $1.17 billion."

DOE has taken a different approach in arriving at our figure of $3 billion of unrecovered cost. By our calculation, the Treasury would get full return on its investment if it ultimately received $3 billion from the eventual sale of this enterprise and/or from dividend payments.

There has been and there will continue to be much controversy over the issue of unrecovered cost. Smith Barney's independent assessment, which they arrived at with the very capable assistance of the accounting firm of Coopers & Lybrand, is that there has been an over-recovery. DOE's figure of $3 billion in unrecovered costs includes a write-off of $4.1 billion for non-productive assets (excess capacity) and related imputed interest. In a 1987 report, the General Accounting Office (GAO) acknowledged that these writeoffs were conducted in accordance with generally accepted accounting principles and recognized that the uranium enrichment enterprise needed to be competitive to survive in today's market. GAO, however, believes that DOE was required to explicitly obtain Congressional authorization for these writeoffs. GAO further recommended that "Congress should allow the writeoff of unproductive assets...." DOE holds that the writeoffs taken were consistent with the Department's statutory authority under section 161(v) of the Atomic Energy Act, and with the Department's uranium enrichment criteria. As such, in the opinion of the Department's General Counsel, the writeoffs did not require action by Congress.

Regardless of how one calculates this <u>past investment</u>, we must look at the realities of the future. The issues we are facing today are what is the best way to improve the competitiveness of the enrichment enterprise and what is the best way to maximize the return on investment to the

taxpayer in the future. On these issues, Smith Barney, the Administration and the Senate are in agreement--these goals are best achieved through establishment of a government corporation with all of the stock held by the Treasury and the eventual sale of that enterprise.

On a separate issue, Smith Barney recommended, as a practical approach to corporate competitiveness, that a Government corporation be assigned an initial debt of zero. The Administration's proposed legislation set an initial debt of $364 million derived from the net appropriations as of September 30, 1986. As the enrichment enterprise has made profits since the time that number was first calculated (1986), there is no longer an initial debt. Therefore, we agree with Smith Barney that the initial debt of the corporation should be zero.

Atomic Vapor Laser Isotope Separation (AVLIS) Technology

Smith Barney concluded that the AVLIS technology is sound, its deployment as a commercial enrichment process is technically possible, and that the successful deployment of AVLIS could give the enrichment enterprise a competitive advantage in the post-2000 timeframe. A special AVLIS review panel, organized by Smith Barney, concluded that the AVLIS deployment schedule projected by DOE could be delayed up to 5 years, capital costs could increase 100 percent and production costs could increase to $44 per separative work unit (SWU)--still well below today's production cost of $75 per SWU. They also found that the completion of an AVLIS technology demonstration by the end of 1992 is optimistic but achievable.

DOE takes exception to the report's conclusions regarding the schedule and costs for deployment of AVLIS technology. The major objection the Smith Barney panel had with DOE's schedule was that licensing problems would cause significant delay. We have allowed 2 years for such licensing and have based this on consultation with experts in the field, recognizing that the hazards associated with enrichment facilities are significantly less than those for nuclear powerplants. Thus, the Smith Barney conclusion that deployment could be delayed by 5 years is overly pessimistic, and we believe that AVLIS has the potential for enhancing our competitive position beginning in the late 1990s, rather than the post-2000 timeframe as Smith Barney concludes.

Regarding costs, we recognize that in the development of a new technology the costs of utilizing that technology are sometimes underestimated, but we believe that there is no basis for doubling the cost estimates as the Smith Barney panel did. The last evaluation of capital costs for an AVLIS production plant was performed in 1989 for DOE and confirmed our production cost estimates of $25 to $50 per SWU for a uranium metal-based fuel economy associated with the AVLIS technology. We believe that Smith Barney's assumptions and judgments in this area were unnecessarily pessimistic as compared to those in the evaluation, and therefore, that our estimates are both realistic and achievable.

NEXT STEPS

Most of the report's recommendations are consistent with current or planned activities, designed to improve the performance and enhance the

competitive position of this billion-dollar-plus annual business. We have begun to implement such measures as we can, particularly in regard to a more rational management structure and cost cutting measures.

However, the additional steps that we can pursue under existing organizational constraints are limited and would not address the fundamental need for commercial flexibility. DOE has steadily improved its operations since 1984, yet substantial problems remain ahead. While we pursue efficiency and competitiveness along a relatively limited number of paths, our foreign competitors can employ a much wider range of options. Without passage of restructuring legislation, we cannot achieve the maximum effect from internal changes and, consequently, the ability of the enrichment enterprise to compete effectively continues to erode.

We are facing severe market pressures today that need to be addressed promptly. DOE's enrichment business used to have 100 percent of the free world enrichment market. It now has less than 50 percent of the market and this share is projected to decline significantly through the 1990s in firm contracts. If the enterprise remains a Government agency, it will be unable to compete effectively to retain commercial customers. We used to be the only free market enricher of uranium. Where a business would have fought to retain that position, the Government closed its order books, quickly causing the emergence of two European competitors, Eurodif and Urenco. Now the Soviets have entered the market with heavily discounted enrichment prices. In addition, the prospects of a Louisiana Energy Services plant (47 percent owned by

Urenco) in the United States and Japanese enrichment capacity by the end of the decade pose further competition.

The competitive pressure on this business is increasingly relentless. We need to move fast to create a Government corporation or we can expect this business to lose further ground.

Smith Barney has confirmed that creation of an enrichment corporation is the best way to maximize the value of the enrichment operation. This study also found that a restructured Government corporation would be able to provide reliable, competitively-priced enrichment, establish a track record of successful operating and financial performance, make capital funding decisions based on economic rather than political factors, and conduct business in a less politicized environment so that it can be managed in an efficient, business-like fashion.

The legislation that currently lies before the House is consistent with the Smith Barney recommendations. It is intended to preserve a valuable national asset--the United States Uranium Enrichment Enterprise--and its importance can be measured in terms of energy security, national security and balance of payments.

Legislation awaiting action by the House would remove the constraints which have hindered the uranium enrichment business. It would:

- Introduce contracting and pricing flexibility.
- Remove the businessfrom the Federal budget process.
- Insulate the business from political pressures.

- Permit a more effective decision-marking process.
- Introduce more streamlined, accountable, and capable management responsible for this Fortune 500 class business.

We believe that the proposed creation of a Government enrichment corporation is a sound, prudent course of action. The Senate has indicated its agreement on numerous occasions. We believe it is time for the House to act.

This Administration is committed to working with Congress to achieve passage during this calendar year. Frankly, further delay seriously jeopardizes the enrichment enterprise's ability to compete and survive--the DOE uranium enrichment enterprise simply cannot operate as effectively in a competitive world as a Government corporation with commercial characteristics could. We are eager to work with you on this legislation and thank you for holding this important hearing. I would be happy to answer any questions you may have.

TABLE 1
UNRECOVERED COSTS
Costs in Billions of $

	DOE		SMITH BARNEY	
Initial 1969 Value	$1.5		$1.5	
Increases				
Interest	5.9		7.5	(1)
Subtotal	7.4		9.0	
Decreases				
Surplus Cash Flow	-0.3		-0.3	
Cost Adjustments	0.0		-4.2	(2)
Write-Offs of Policy Costs	-4.1	(3)	-5.7	(3)
Total Decreases	-4.4		-10.2	
Sept 30, 1989 Value	$3.0		($1.2)	

Notes: (1) Smith Barney added interest costs relating to DOE's write-off of $4.1B.

(2) Smith Barney reduced DOE's production cost that should have been applied to Defense customers ($1.1B), carrying costs for uranium inventories ($1.5B), costs of uranium applied to overfeed the enrichment plants ($0.6B), interest based on fixed versus variable rates ($0.9B), and other miscellaneous items ($0.1B).

(3) DOE wrote off Policy Costs for GCEP ($2.9B) and excess GDP capacity ($1.2B).

Smith Barney wrote off $5.7B or 50% of the following Policy Costs:

(1) GCEP	$2.9B
(2) Excess GDP capacity	$1.2B
(3) TVA payments	$2.6B
(4) Associated interest on the above 3 items	$4.7B
Total	$11.4B

06/27/90

U.S. Department of Energy
Office of the Secretary
Washington, D.C. 20585
202/586-5534

BIOGRAPHY

HONORABLE W. HENSON MOORE

The Honorable W. Henson Moore was nominated by the President to be the Deputy Secretary of Energy on April 4, 1989. Mr. Moore was confirmed by the United States Senate and sworn into office by Vice President Dan Quayle on April 12, 1989.

As Deputy Secretary, Mr. Moore is the number two ranking official at the Department of Energy and assumes the duties and powers of the Secretary when the Secretary is absent or unable to serve, or when the office of the Secretary is vacant. Mr. Moore also participates in all of the Department's key policy deliberations and decisions and plays a regular role in relations with Congress.

Mr. Moore had been a senior partner in the Washington, D.C. law firm of Sutherland, Asbill & Brennan from January 1987 until joining the Administration. During his tenure with Sutherland, Asbill & Brennan, Mr. Moore was asked to serve as a member of the Board of Directors of the Institute for Research on the Economics of Taxation, the American Council for Capital Formation, the Jefferson Energy Foundation and the Committee for a Responsible Federal Budget. He was also a member of the U.S. Chamber of Commerce Taxation Committee, and the National Association of Manufacturers' Taxation Committee.

In June 1987, Mr. Moore was named by President Reagan to serve as one of three United States Representatives to the Panama Canal Consultative Committee to negotiate with the Panamanian Representatives the transfer of the Canal to the Panamanian government in the year 2000.

From 1975 to 1987, he served in the United States House of Representatives as a Member of Congress from the Sixth District of Louisiana.

During his years on Capitol Hill, he served on the Energy and Commerce Committee, the Agriculture Committee, the Budget Committee and, for the last eight years in Congress, was a Member of the Ways and Means Committee. As a Member of the Ways and Means Committee, he was involved with all tax bills written during that period of time and was regarded as one of the few Congressional experts in the area of energy taxation. While in Congress, he was an elected Member of the Republican Executive Committee on Committees and the Republican Leader's appointee on the Republican Policy Committee.

(more)

From 1967, until winning election to the United States Congress in 1974, Mr. Moore was a partner in the Baton Rouge, Louisiana law firm of Dale, Owen, Richardson, Taylor and Mathews. He was a litigator and a legislative counsel before the Louisiana Legislature.

Mr. Moore served in the United States Army as a Captain in the Military Police Corps from 1965 to 1967.

With Baton Rouge, Louisiana as home, Mr. Moore received his B.A. and M.A. in Political Science from Louisiana State University and a degree in law from LSU Law School.

Mr. Moore is married to the former Carolyn Ann Cherry. They have three children: William Henson, Jennifer Lee and Cherry Ann. The Moores currently reside in Potomac, Maryland where they are members of the St. Francis Episcopal Church.

April 1990

The CHAIRMAN. I thank the distinguished gentleman for his testimony.

Without objection, the entire statement of the witness will be placed in the record.

Mr. MOORE. Thank you, Mr. Chairman.

The CHAIRMAN. Also, at this point I'd like to ask unanimous consent to place a statement in the record by Mr. Brown from California who is at a conference meeting at the moment.

No objection, so ordered.

[The prepared statement of Mr. Brown follows:]

Statement by Congressman George E. Brown, Jr.

on the Uranium Enrichment Reorganization Act, H.R. 2480

Science, Space and Technology Committee
October 11, 1990

Mr. Chairman, I greatly appreciate your holding a hearing on the issue of DOE's uranium enrichment program. This is a very complex and controversial issue which concerns me greatly, as I know it also does my distinguished colleagues from Michigan and Rhode Island, Mr. Wolpe and Ms. Schneider.

I hope the hearing today will provide some clarity on several issues, particularly the following: 1) What exactly are the unrecovered costs of the enrichment program and just how much should the U.S. taxpayer be expected to bear? 2) What are the estimated decommissioning and decontamination costs, and how and at what rate should these costs be recovered?, and finally 3) What are the risks and benefits associated with the proposed AVLIS project?

Clearly, bailing out an industry that has failed to prove profitable under the current management structure is not the solution. The uranium enrichment program should be retained as a federal enterprise, but it also must be much more carefully managed and regulated. I am very hopeful that the information we will glean from today's hearing will help us reach this goal.

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The CHAIRMAN. Tell me something. I think that you have eloquently laid out the basic concerns as far as the country would be concerned vis a vis the point of the security issues of not only the military, but therefore of the Nation. I think you laid out well the point of view why we should be doing this in the marketplace from balance of trade payments, etc., etc., etc. Having said that, you made the statement, as I heard you say, "Well, you know, if we could do our 'druthers in our own way and we could just jump right through it now we would go into private enterprise and do it, but there is a lot of other intervening problems that exist." Having said that, I think it would be valuable to get—you didn't speak specifically to the AVLIS process. Some of our folks who commented in their opening statement said, well, you know, the technology has yet to be finalized and research, and we're really not at this point ready to make a major commitment to the process until the research work is done and pilot plant work, etc., etc., etc.

What I'm trying to get at and to get into the record: as I understand, there are two particular methods we are using now. Primarily the centrifuge issue particularly is what we are using now, but the idea of the AVLIS is to be able to get to the point of having an advanced technology that particularly, unto itself, saves extraordinary amounts of energy to operate the AVLIS system, therefore making it highly competitive worldwide. Fair play?

It seems to me that when we have the competition that is developing in the Soviet Union and the competition that will develop in the Eastern European states and with the work the Japanese are doing—and I believe the French, too—that someplace along the line, for us to make this kind of investment we ought to be making an investment into, again, a technology that is going to put us on the cutting edge of the issue. That's what I want to get into the record. Is that a correct assumption that I am making here?

Mr. MOORE. Mr. Chairman, you are absolutely correct. There is one point that I did make only in passing that touched upon a comment made by the gentlelady from Rhode Island, for whom I have great affection and great respect, when she said, "How does all this play into a national energy strategy and the fact we don't have one?"

We are developing a national energy strategy at this very moment. We have a President who asked us to do that 16 months ago before anybody had any idea that Iraq would begin to cause us problems.

We look at that strategy. It will be on his desk in early December.

The CHAIRMAN. You're going to have fun with me. There is an awful lot of people on this committee that for years have been attempting to get this done—

Mr. MOORE. That's correct.

The CHAIRMAN.—but nobody would listen.

Mr. MOORE. I think we've all been hoping for one.

What we found out is the reason why you don't have one is it is very complicated, it is very difficult, there are no easy choices, and that the country, the President, the Congress is going to be faced with some very difficult issues to be able to work our way out of the problems we have.

The point I'm leading to is that one of the things we are going to need is nuclear power. We don't see how you are going to get there from here if you just simply wipe nuclear power off the face of this country in terms of a source of energy.

We believe you are frustrating a national energy strategy if you are not in the uranium enrichment business providing the fuel those plants need. It is similar to importing oil for oil-fired electric plants on the East Coast or importing other forms of fuel to generate electricity.

So we think this certainly is a national energy strategy implication—this legislation we are talking about today.

The CHAIRMAN. Would the gentleman yield there for a second so we can get it—want to put it in continuity, if you can yield for a second. In effect, what we are saying that we've got coal and oil and, of course, we have our renewables which we're all striving to get to. But I think a determination ultimately is going to have to be made in national policy as to what role the nuclear energy is going to play in our energy system.

I think that there are those who would be opposed to any nuclear energy—Chernobyl, the whole bit, and so forth and so on—those recognize factually that if we are going to be able to stay competitive in a productive point of view that nuclear energy is going to play a role in our energy plan for the future.

Would you buy that point of view?

Mr. MOORE. Yes.

The CHAIRMAN. Okay. Now go to the AVLIS, because if the gentleman again would yield, what I'm trying to get into the record, Henson, is that the value of the AVLIS system, as my research indicates, is that it is particularly effective is the point of view the input of energy to operate the process. That is a key point to make. So the AVLIS is the most advanced information that we have at the moment? Is that correct—or technology at this point—

Mr. MOORE. Yes.

The CHAIRMAN.—in that field. All right.

Mr. MOORE. And this committee ought to understand that better than any other committee of the Congress because it deals in science and technology. This was a process that began in Lawrence Livermore Laboratories out in California. It was being looked at for defense purposes. The defense purposes have now been cancelled. It is being pursued strictly for civilian purposes for uranium enrichment, and it is the leading technology that anybody in the world has come up with. It is the hope that we would have to be able to once again regain market share by virtue of the fact that the cost of producing a SWU—the measurement of enriched uranium will be half using AVLIS what it is today using either the diffusion method we use or the centrifuge method that some of our international competitors use. So the idea of not pursuing AVLIS is one of saying, "Let's not improve any technology. We're content to stay put and be able to compete in the world." That won't work. This Committee knows that.

Every single penny that we have spent on AVLIS for the purpose of uranium enrichment—

The CHAIRMAN. How much have we spent? Do you know offhand?

Mr. MOORE. It's $950 million in research and development so far. Every penny of that has been recovered from the commercial buyers of enriched uranium from the enrichment services of the Department of Energy. We have recovered all $950 million of that. It has been paid back into the treasury. And we would assume that this would continue to be the operation as long as this operation is profitable. That's the point we're making: how much longer as a government enterprise this can continue to remain profitable. We, Smith Barney, and the Senate believe that under a government corporation it will be profitable.

The CHAIRMAN. Let me ask one more question, and then I'll defer to the gentlelady from Tennessee. The devil's advocate: if we believe that there should be an ultimate direction to go to private enterprise, why don't we just do private enterprise right away for the following reasons: private enterprise, their management skills, their corporate structure, their financial skills, and so forth—and put it into a private field? Why wouldn't we do that?

Mr. MOORE. There are two reasons. We'd be delighted to go right to privatization, go right to a private company if that could be done. There are two reasons: political and I think business.

On the political side, there are people in the Senate— and maybe people in the House of Representatives—who are not ready to go to private. They want to still have some control over this before they finally dispose of it and turn it over to the private sector.

The CHAIRMAN. Without speaking for them, can you give us a reason why?

Mr. MOORE. No, I can't really—

The CHAIRMAN. The second point?

Mr. MOORE. The second point is that there is the feeling that it needs more of a corporate track record to be able to attract the private investors in the future. Smith Barney can speak to that better than I can. But those are the two reasons given. If this committee believes that those reasons are not valid and we can move it to privatization now, we're willing to try it.

The CHAIRMAN. The Chair recognizes the distinguished gentlelady, the chairman of our subcommittee, Mrs. Lloyd, from the great State of Tennessee.

Mrs. LLOYD. Thank you very much, Mr. Chairman.

Mr. Secretary, we thank you for being with us today, for we know it was not easy with all of the problems before the Department of Energy to be with us today, so we do thank you for your time.

Going back to cost, Mr. Secretary, Smith Barney estimated the uranium enrichment enterprise unrecovered cost as of September 30, 1989, at $4.5 billion without factoring in the government write-offs; is that not correct?

Mr. MOORE. Wait a minute. Did you say $4.5 billion in unrecovered cost?

Mrs. LLOYD. Without factoring in the government policy cost. According to my—

Mr. MOORE. Before they made some write-offs.

Mrs. LLOYD. And Smith Barney also concluded that it would be appropriate to write off nearly $5.7 billion, or 50 percent of the government policy cost, and DOE computed these, I believe, at a little

bit more than $4 billion. So, based on these factors, Smith Barney stated they believe there is no unrecovered cost; in fact, there has been over-recovery of $1.17 billion.

Mr. MOORE. Yes.

Mrs. LLOYD. This is correct. And referring back to the General Accounting Office, in a 1987 report GAO acknowledged that these write-offs that DOE had factored in were conducted in accordance with the generally accepted accounting principles, but they did maintain that they needed Congressional authorization. DOE held that the write-offs taken were consistent with their statutory authority and that they had this authority under section 161(V) of the Atomic Energy Act; is that not correct?

Mr. MOORE. You are correct, Madam Chairman. But, if I could take it one step further, this points up the reason why you need to get out of the government and get into a corporate structure. Here is a case where the GAO has fully agreed— and this is something that needs to be listened to very carefully by people who are listening to certain groups outside the Congress making a big issue of this. The GAO is saying, "You folks at DOE should have gotten Congress' permission before you wrote that off." The lawyers at DOE before I got there said, "No, we didn't have to have that. This is a normal business practice." Everybody agrees, including GAO, it was a normal business practice and it was a proper write-off. The only dispute is should we have asked Congress' permission, not is it a valid write-off or not. So when you look at the rack-up of how much money the taxpayers have invested into this enterprise that hopefully they will get back, I don't think anybody disputes the fact that the $4.1 billion that we wrote off was properly written off and properly cannot be expected to go back to the taxpayers as it was money spent on a failed business venture of trying to get into a new form of production that didn't work—didn't produce any income.

Now, the point I'm making is the fact that the GAO also went further to say that if you don't do that, if you try to lop this money back into the picture and cash that as a debt and say this company now owes $10 billion—this enterprise — who is going to buy it? Who is going to buy something with a $10 billion debt? And how are you going to amortize it? You can't.

As a practical matter, GAO recognized that in its report, as well. So we are talking about a technical point here, not a real point of did the taxpayers not get something they should have gotten. The GAO is not saying that. The GAO has simply said, "You fellows should have gotten permission from the Congress." The lawyers at DOE said we didn't have to; this is a normal business procedure.

Had this been any private corporation, the Congress never would have been consulted. They wouldn't have had to be consulted. It was a normal business practice with which no one disagrees.

Mrs. LLOYD. Give me your opinion of the future of this enterprise if we don't restructure. You know, 100 percent of nothing, Mr. Secretary, is nothing.

Mr. MOORE. I tried to make that point. My math is like yours. If you do not do something to get this enterprise and to keep this enterprise in a competitive mode in the marketplace, the taxpayer is never going to get anything back. The taxpayer is never going to

get anything back. The taxpayer is ultimately going to foot the full bill of cleaning it up and the full bill of operating, and if we shut it down tomorrow what happens? If we decide tomorrow we are going to buy all of our nuclear fuel for our civilian power plants overseas, okay, that's a balance of payments problem you've just made worse. You lose jobs in Kentucky and lose jobs in Ohio and potentially in Tennessee. That's another problem.

You assume we're going to buy all this fuel now for our nuclear Navy overseas. Okay. Now you've raised the antennae of the defense establishment here in the Congress and elsewhere. You mean our nuclear Navy will sail only if we can make a deal with the Soviets or we can make a deal with the French or we can make a deal with somebody else who makes this fuel? Yes, that's the answer. I doubt that's going to happen.

But if you operate that way, you lose all of your commercial customers in time, you go down to a $300 million a year cost to run it as a government national defense venture as we run other nuclear enterprises for this country for national defense. That's a net cost to the taxpayer every year. You never get anything back.

And so you are quite right. The only way you are going to ever get something back is to keep it going competitively in the civilian market, spend it all, let it continue to make a profit—which it has been doing for the last six years— which is going back into the treasury, reducing the amount of money that the taxpayers have invested in it, and then ultimately you sell it when the track record is good enough that you think you can get the investors to buy it. And then from that sale you recoup additional money.

But if you do nothing, I'm afraid the taxpayer is going to wind up getting nothing out of the deal, and I think that's — I would think it is a very inappropriate way to treat the taxpayer in the name of the taxpayer. I hope that I am here and you are still here and many others, if that were to happen, to remind the American people of how it happened and that this is not something that went by accident—it went by decision.

Mrs. LLOYD. One final comment, Mr. Chairman.

It seems to me the best way for us to maximize our investment in our uranium enrichment business is to form our government corporation and then have the eventual sale of the enterprise to the private sector. In this manner we will have some return on our investment. As a taxpayer, I look forward to that return on my investment.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Mr. MOORE. Madam Chairwoman, you are correct. You and I agree with this. The Senate agrees with this. There is probably a majority of the House that agrees with this. But, more importantly, Smith Barney and the business sector has looked at it and has agreed to it and will testify later.

Mrs. LLOYD. Thank you.

Mr. MOORE. I think they're the ones who understand the business world even better than we do.

The CHAIRMAN. The Chair recognizes the distinguished gentlelady from Rhode Island, Miss Schneider.

Miss SCHNEIDER. Thank you, Mr. Chairman.

Following along that same line of questioning, I concur that it doesn't make good business sense to try to sell a business with a $10 billion debt hanging over it. But I also don't like the idea of saying, "Let the taxpayer pick up that debt." I do understand how we need to move toward the more palatable condition, as you are suggesting. But what is interesting is that one of the Smith Barney recommendations was that the Department of Energy raise its prices immediately to the maximum permitted under its contracts. Now, if you were to raise your prices immediately, would you not be in a better financial situation? And instead of having the taxpayer have to foot the bill, why wouldn't it be covered otherwise?

Mr. MOORE. First, we do not agree with the thesis of your comment there is a $10 billion debt. I just explained that. The GAO doesn't even say there is a $10 billion debt. And so people are misconstruing—perhaps intentionally— the GAO report. It does not say the taxpayers wrote $10 billion. It says, "DOE, you should have asked Congress' permission to write that down from $10 billion." It didn't say that we were improper. As a matter of fact, it agreed we were proper in writing it down.

Miss SCHNEIDER. But when you calculate the various write-offs and the unrecovered costs, those add up to about $10 billion, even if you are just writing off four.

Mr. MOORE. In the business world a write-off is not a debt. A write-off is when you have spent money, it has not worked out, and you declare it as a deduction from your income. You simply write it off your books. That's what was done here, and the GAO has agreed with that as being a proper write-off. Now—

Miss SCHNEIDER. But what—go ahead.

Mr. MOORE. To get on to your point, the point you are raising is: should we be charging more for our enrichment services, therefore receiving more money into the enterprise and—

Miss SCHNEIDER. Right.

Mr. MOORE.—making a bigger profit and paying more money back to the treasury? The answer is absolutely if we can get it in the marketplace. You can't set the price if you can't get it. You can't set the price if somebody is not going to pay it. This is a business proposition. I don't think the Smith Barney report was saying, "DOE at this very moment you're not getting everything you could." What it was saying is to do everything you can to maximize your profits. And we certainly agree with that general admonition. We'll do everything we can to do that.

But the minute you raise the prices above the market price the customer doesn't buy it. The customer goes someplace else. If you have a customer under a long-term contract, as we do still have some—and as those contracts are coming up they are not being renewed, they are going into the spot market where they can buy it cheaper—if we tried to go ahead and raise the prices on them now, it simply would encourage them, ensure their walking out on us as we have lost $5 billion in sales already by just doing that very thing.

Miss SCHNEIDER. What is the market price now?

Mr. MOORE. It is about $100 a SWU from the spot market right now.

Miss SCHNEIDER. And what is your price?

Mr. MOORE. The information—I didn't hear it right. The market price today is about $50. We are charging at this moment—wait a moment. The spot market right now is $50 and we are now charging $110. That's allowing us to make a profit. That's not a loss figure. But it is well above what the spot market is and what the Soviets are apparently selling for and are beginning to take our market right here in the United States.

Miss SCHNEIDER. Well, one of the things that concerns me, when you look at the bill that we have before us, H.R. 2480, it repeals the cost recovery requirement, writes off various unrecovered costs, and otherwise encourages lower prices. I'm just wondering, with those components, where is that going to lead us?

Mr. MOORE. You ask a good question. You ask a question that you as a legislator should be asking. Are we setting up the taxpayer here—

Miss SCHNEIDER. Yes.

Mr. MOORE.—for greater losses or for losses by virtue of taking away the protections they supposedly have under the existing law? The answer is: if you are going to move this into a corporation, you have to allow it to function as a corporation. It has to be able to make a profit. It can't be legally bound to do something it can't do in the marketplace.

Mrs. LLOYD. Would the gentlelady yield at that point?

Miss SCHNEIDER. Yes.

Mrs. LLOYD. Is it not true the reason that we are getting some of the higher prices for our SWU is because of long-term contracts that were in place before the market went down? It's not because of a dear love for our enriched uranium. These are contracts that are in place that utilities are in a hurry to get out from under; is that not correct?

Mr. MOORE. By the year 2000—the gentlelady from Tennessee is correct that the profit we are making—and we made a profit for fiscal year 1990. We just closed out. For the fourth or fifth year in a row we made a profit and gave that money back to the treasury. We made $90 million. That's primarily because we still have these old contracts that we can charge people above the market price and they are bound to pay it. And we're losing those contracts, and by the year 2000 they're all gone, which means we are then in the spot market. We've got to charge whatever they are charging in the spot market, and right now we can't meet that spot market price successfully.

Mrs. LLOYD. I thank the lady for yielding.

Miss SCHNEIDER. So are you suggesting that taxpayers and the government then will end up subsidizing this transition period until the year 2000?

Mr. MOORE. What it boils down to is simply this: every year we come to the Congress for an appropriation to run this enterprise and you all vote yes you get this money or you don't. Every year we try to make a profit on the amount of money we spent. In the last six years or so, we have done that. So the taxpayer has not lost. As a matter of fact, as of last year the taxpayers had now received more than has been appropriated and spent in this enterprise since its beginning. That's the first time. We crossed that line in 1988 and got into it in a big way in 1989, and continued that

trend for 1990. We actually have now sent more money back to the treasury than we took out over the life of the enterprise. The trick is where are you going from here.

Miss SCHNEIDER. Exactly.

Mr. MOORE. To be able to go forward, you're quite right. The taxpayers of this country are the investors at this time and the owners of this enterprise as it is owned by the government.

Miss SCHNEIDER. Well, according to this legislation there is no legal obligation for this to be profit-making.

Mr. MOORE. Well—

Miss SCHNEIDER. And so we would end up being in the same situation that we are in right now where you'd have to end up forgiving debt once again and writing off different costs.

Mr. MOORE. It does have the mandate in it that we are to charge prices to commercial customers to maximize profits of the corporation. That's like any corporation. You can't tell it you have to make money. Every shareholder in every corporation in America holds the board of directors to make money. Some years they don't.

Miss SCHNEIDER. Yes, but this is pretty tricky because a moment ago you were suggesting that because this is a quasi- business government operation, when it is to the business' advantage we are running it as a business; when it is to the disadvantage of the taxpayer, we'll have to take the taxpayers' loss.

This legislation doesn't have in here anywhere—I mean, it seems to me that one of the most reasonable things that ought to be included if we are really serious about privatization would be to put a firm sunset provision into the law.

Mr. MOORE. That's fine. We're certainly willing to work with you on something like that. By the way, we don't agree we run it differently. We run it every year the same way. Some years you make money and some you don't.

Miss SCHNEIDER. Well, what concerns me—

Mr. MOORE. Over the life of the enterprise we have made money for the American people.

Miss SCHNEIDER. What concerns me is that without some type of clear-cut closing of what appear to me to be loopholes, we don't know where we'll end up by the year 2000. We could end up in the same fix that we are in right now in which, as far as I am concerned, by assessing the information that I have, I see that the taxpayers are in the hole as a result of this enterprise.

Mr. MOORE. Well, we read the figures differently. I have tried to explain them.

Miss SCHNEIDER. Okay.

Mr. MOORE. If you want to simply put into legislation that by a certain date this thing has to come back to Congress with a decision whether it is to be continued or sold, that's something we're more than willing to discuss with you. We're not concerned about that. We're

Miss SCHNEIDER. Well, I—

Mr. MOORE.—concerned about this enterprise making the people money, getting out of it, getting into a private corporation as a result of taking losses and as we are on the trail of doing now.

Miss SCHNEIDER. Well, it is usually the business community that welcomes sunset provisions, and so I would think that in this case

the taxpayers would be very relieved to know that there is some end in sight and that the potential for their responsibility in carrying the burden has a deadline to it. So yes, we'll pursue looking into that.

Thank you, Mr. Chairman.

The CHAIRMAN. I thank the distinguished gentlelady from Rhode Island.

Who else is seeking recognition to speak to this issue?

The gentleman from Michigan, Mr. Wolpe?

Mr. WOLPE. Thank you very much, Mr. Chairman.

I am delighted to have you again before us, Henson, and be able to discuss these issues with you.

Mr. Secretary, I'm still intrigued by the fact that there were two different reports—one that was the original, unsanitized version, and a second version that was publicly distributed. The second version that was publicly distributed did not contain within it three specific recommendations that Smith Barney had proposed that I think fairly could be construed as direct criticism both of the management of the enterprise up to this point and implicitly of elements of the legislation that are now before us.

Could you please tell us why those three recommendations were not contained in the version of the report that was released publicly?

Mr. MOORE. There were two versions of the report, which is not uncommon. We tried in the report that we made public to let the information—whatever information there may be that would be of no damage to this organization by virtue of giving out competitive information our competitors could use to beat us with. That was what was held back. And Smith Barney put that in a full, unabridged report which was given to the Congress, given to committee staff, and given to any Member of Congress who wanted to see it. We simply didn't think this ought to fall in the hands of our competitors internationally. It wound up doing that. Somebody gave the report to some public group which made it, and so whoever did that has now seen to it that they now know what our projections are for revenues and for losses, and we intend to sell. And I can assure you that when IBM intends to come out with a new product line it doesn't give that proprietary information to Apple and to its competitors. So that was the purpose—to keep it not from the Congress, but to keep it from competitors.

Mr. WOLPE. But let me just suggest to you—first of all, I think we all know that it is public now, so I'm not discussing anything publicly that is not already in the public arena. I think it is a real question as to the propriety of the information that was initially withheld from that public report. I say that because the Smith Barney report has been essentially—those parts of the report that were made public seem to essentially represent an endorsement of the legislation that is before us and of the analysis that you have presented to us today. In fact—

Mr. MOORE. I think it is. I think Smith Barney will testify to that today. They'll tell you the same thing.

Mr. WOLPE. But, in fact, there are elements of the Smith Barney report—namely, the recommendations—that I think run counter to

some of what is now before us, and that's what I'd like to pursue for the moment.

The first of the recommendations that was not provided in the publicly disseminated report is the one that the gentlewoman from Rhode Island was addressing just a moment ago, which is that the DOE raise its prices immediately to the maximum permitted under its contracts. The second of these recommendations is that the agency essentially serve as a marketing agent for Soviet-supplied uranium. The uncensored version of the report indicates that this would enhance the value of the civilian uranium enrichment program by some $340 million.

Now, one question—let me just mention the third policy recommendation and then come back to that. The other suggestion in the Smith Barney report is that to improve the value of the civilian uranium enrichment enterprise the agency continue to explore the AVLIS technology for possible future implementation. As you noted in your testimony earlier, they were much less enthusiastic than is DOE about the time table and the final commitment to the AVLIS technology.

The uncensored version of the report indicates that AVLIS, even under favorable projections, will enhance value by only about $170 million over a 20-year time frame, which calls into question, I submit, at least of the return on investment that would be involved in the initial commitment for the AVLIS technology.

Those are the three policy recommendations. It seems to me those are pretty central to any decision of this Congress as to how we move forward. They go to the heart of whether the enterprise has been managed appropriately and how we get out of the hole that we have already dug for ourselves.

To suggest for a moment that there could be any sensible public policy debate without those three recommendations being central to the public discussion boggles the mind. Just for the record, I find this proprietary stuff absolute nonsense. There's now way we could be making a rational, informed decision without looking at those very points that they were making.

Mr. MOORE. Any Member of Congress could, was given the report when they asked for it—

Mr. WOLPE. Yes, but that was Members of Congress. That's a matter the public taxpayers should know about.

Mr. MOORE. Well—

Mr. WOLPE. Why should they not be told that there may be a better way of saving taxpayer dollars? Why should this only be a matter that is in-house for this committee?

Mr. MOORE. That's a decision that was made by the Department working with Smith Barney on what we considered proprietary. We held that out. We did not want our competitors to have it. We gave the Congress the whole report. You disagree with that. That's fine. That's history. That's behind us.

Let me address the three points you just made.

First, the idea that we ought to be charging everything we could. We are. We took that recommendation and we are doing it.

Number two: why not deal with the Soviets? That is now before an inter-agency process of the Federal Government now determining whether that is proper, whether we should be doing that. On

paper it makes sense. Is it good government policy? Is it good business policy? We're now looking at that very thing. It has been under consideration by the Administration now for about six months.

Third and finally—

Mr. WOLPE. Before you—

Mr. MOORE.—the AVLIS decision. Should we use AVLIS? That is something this corporation would make the ultimate decision on. We think they can make that decision in a business environment better than we can do in a government environment. There is going to be government pressure to use technology that shouldn't come to bear.

Mr. WOLPE. One comment—

Mr. MOORE. The corporation ought to make that decision.

Mr. WOLPE. One comment on the last point, and then I want to come back to the question of the Soviet-supplied uranium.

Mr. MOORE. Yes.

Mr. WOLPE. The problem is that this legislation creates a structure of a corporation that would be empowered to make those decisions and also establishes the parameters for whatever taxpayer risk would be involved in the decisions that the corporation proceeds to make. So to suggest that somehow that's a decision for the corporation that we can put into the future—let the corporation make the decision—is to really expose the taxpayer—

Mr. MOORE. Are you talking about AVLIS or are you talking about the Soviet proposition?

Mr. WOLPE. I'm talking about AVLIS at this point. I was referring to the last piece.

Mr. MOORE. Well, it's obvious we don't see eye-to-eye on hardly anything on this. If we do it in the government structure, you complain that we're not making good business decisions. If we give it to the business structure, you complain that maybe the government ought to be making it. I don't know how we get out of that—

Mr. WOLPE. Let's not kid ourselves. This business structure you are discussing is essentially a government corporation. It is not a private enterprise at this point. That's into the future.

Mr. MOORE. But the decision will not be made by the government; it will be made by the board of directors of—

Mr. WOLPE. Once it is private, you mean?

Mr. MOORE. No. When it is a government corporation. The board will make the decisions.

Mr. WOLPE. That's right. So the decision about AVLIS you're proposing be made when this is still a public entity.

Mr. MOORE. Owned by the public, yes.

Mr. WOLPE. That's right. So should we not have some clear understanding in advance of authorizing that process to be initiated as to what the potential downsides are for the taxpayer?

Mr. MOORE. Certainly we're willing to discuss that with you on how we might do that.

Mr. WOLPE. I appreciate that.

Mr. MOORE. The point is that somebody has got to sit down and look at what it is going to cost to build it when it is perfected after it is mocked up into a commercial size or a pilot kind of a program. What is it going to cost to run it? What are you going to be able to

sell for? Are you really going to be able to undercut the market? The question is: who can best make that decision? We think the people who are in the business sector can do that better than those at the DOE. But if you've got some ideas about how we can give some guidance to protect the taxpayer on that, we're certainly willing to listen.

Mr. WOLPE. That, I take it, is the purpose of this legislative consideration. Are there ways of building in protections in this legislation where we have a clear understanding of whatever limits should be imposed upon taxpayer obligation?

Mr. MOORE. We're willing to look at them. We don't have any we can think of. If you've got some, we're willing to consider them.

Mr. WOLPE. The other question—I want to come back to the Soviet issue finally. Is any change in current law required to implement the recommendation of the Smith Barney report? If so, what would be that change and where is that change found in the legislation before us? That is the change that would essentially call for the agency to serve as a marketing agent for Soviet-supplied uranium.

Mr. MOORE. To enable us to deal with the Soviets, yes, we would have to propose specifically to the appropriations process that we were using the money for that purpose. We have not yet done that—certainly not for fiscal year 1991 that is before you. We haven't done it for fiscal year 1992. It hasn't been submitted yet. The Administration is still considering that.

Mr. WOLPE. So this legislation would require amendment if you were to contemplate that particular—

Mr. MOORE. I'm not sure this legislation would require it. Until the legislation is passed, we're still going through the appropriations process. We could do it there.

Mr. WOLPE. I see.

Mr. MOORE. But yes—

Mr. WOLPE. But you don't have the authorization yet?

Mr. MOORE. I think the Congress needs to deal with that question of whether we are going to get into going into business by buying Soviet production and bringing it into this enterprise and reselling it here in this country.

Mr. WOLPE. And if DOE seeks to implement this recommendation, approximately how many separative work units, or SWUs, per year from the Soviet Union would it market? And would DOE shut down one of the two currently operating uranium enrichment facilities?

Mr. MOORE. The Soviets have not made an offer to us of how much. We do not envision shutting down either one of the two facilities we have, even if something like this was to transpire, because we don't think the amount that would be involved would justify ceasing production at either one of our two facilities.

Mr. WOLPE. Finally, Mr. Chairman—

The CHAIRMAN. We've got to vote.

Mr. WOLPE. If I can just make this one last comment, which is: the reason this is such an important question, it appears on the surface that, if the Smith Barney recommendation is accurate, that the value of the civilian enrichment uranium program could be enhanced by some $340 million, this might be a lot less risky means

of improving the value of the corporation than some of the other suggestions that are before us.

Mr. MOORE. I do not disagree. If we were to enter into a business cooperation with the Soviets we could make a profit and that profit would accrue to the taxpayer. You are correct.

Mr. WOLPE. Thank you very much.

Mr. MOORE. There is a policy matter involved here, not business.

Mr. WOLPE. Sure.

Mr. MOORE. We do have opposition from a lot of the utility companies who are saying, "What's the government doing getting between us being able to buy these same SWUs and being able to buy them at the cheap rate versus them going through the government and being marked up and being sold at a higher rate?" So you have a business problem there. You do have a government problem. Is this a proper thing for the Federal Government to be involved in—buying a product from a foreign country and reselling it. And so these things have not been worked through yet.

The CHAIRMAN. The Chair is going to have to recommend - -

Mr. WOLPE. Thank you very much.

The CHAIRMAN.—short votes here. So we have to suspend for a moment while the members go and vote.

Will the members please come right back so we can proceed?

The CHAIRMAN. The committee will reconvene.

The Chair recognizes the distinguished gentleman from North Carolina, Mr. Valentine.

Mr. VALENTINE. Thank you, Mr. Chairman.

Mr. Secretary, is there a privately-owned uranium enrichment enterprise in existence anywhere in the world?

Mr. MOORE. Yes, Congressman, there are two that operate in Europe—Urenco and Eurogen. There are those two. There is the potential—there is one been announced to be built in Louisiana that would be privately owned. The Japanese are talking about building one themselves. Whether that will be government or private, I do not know at this time. The Soviets are in the business, and at this point, of course, that's government owned.

Mr. VALENTINE. The enterprises that you mentioned that exist in Europe, are they completely free of government control to the extent that a for-profit corporation with its stock listed on the New York Stock Exchange and not subject to regulation would be free of government control?

Mr. MOORE. They're not totally like a private corporation. They are more like a quasi-government-owned corporation. There is some private utility company involvement, but even some of the utility companies involved are government owned and operated. So it is not totally a private corporation, nor is it totally a government enterprise.

Mr. VALENTINE. And when we speak of uranium enrichment, we are speaking of a process that is necessary to create energy—this source of energy. But we are also talking, are we not, about a process that is necessary in order to make weapons?

Mr. MOORE. No, Congressman. The two uranium enterprises we have do not fit into the weapons cycle except to prepare the fuel for our nuclear reactors aboard our nuclear Navy.

Mr. VALENTINE. So if the Iraqis—if we didn't have the work that we can thank the Israelis for, the atomic or nuclear capability which they were developing, which was halted by the Israelis several years ago, if that was still an ongoing enterprise, there would be no need for enriched uranium in connection with that—in connection with the construction of weapons in any way, shape, form, or fashion?

Mr. MOORE. We did once use these facilities for weapons production material, but we haven't done that since 1964. It is done in different facilities. We do obviously still need the ability to produce plutonium, enrichment uranium, and tritium, depending upon what the weapons needs are of the country from the defense complex. But we do no longer use these two operating facilities for enrichment for the defense complex other than producing naval fuels for naval reactors.

Mr. VALENTINE. Of course, what I'm getting at—and I think you probably answered it—is: is there a security problem that needs to be addressed and needs to be taken into consideration as to whether or not this is an enterprise that should be conducted by the government—at least controlled by the government—or if it can be set free in the private sector from a national security point of view?

Mr. MOORE. We would feel comfortable having an American company providing fuel for the American Navy. We buy many things for our defense complex from private contractors. We would not feel comfortable in having to go outside the country for 100 percent of the needs of our nuclear Navy.

Mr. VALENTINE. Well, that was my next question, Mr. Secretary. I don't want anything that I say to be construed as—

The CHAIRMAN. Will the gentleman yield?

Mr. VALENTINE. Yes, sir.

The CHAIRMAN. I think the point is a very strong and very important point, and I think that we have been skirting around. I don't mean it disrespectfully. We say we wouldn't feel comfortable. I mean, the fact remains that we could very well find ourselves relying on all other countries throughout the world for our capability. It would seem to me, if the gentleman would yield further, that as the volume of production diminishes because of lesser generators at the moment, at least, and international competition, it is going to exacerbate the cost problem in the existing operating facilities we have now. It has got to do that, I would think.

Then one comes back and says, "Okay. Fine. Do we want to be in a position where we are out of business simply because we don't have domestic capability? I would think that we ought to be getting someplace on the record—maybe you're not the proper witness, Mr. Secretary—but I think we ought to be getting on the record: is there a security issue that should be a material part of this debate? I think the gentleman's question is very well taken.

Mr. MOORE. Mr. Chairman, we certainly agree with both you and Congressman Valentine that we are responsible at this particular point for this country for producing the nuclear materials for our nuclear Navy and that we would not recommend to the President, we would not recommend to the Congress that we abandon that. We'd have to buy that from someplace else.

The CHAIRMAN. For the record, what we're saying, if the gentleman would yield further—for the record, what we're saying here is that we would be totally dependent—

Mr. MOORE. True.

The CHAIRMAN.—upon outside forces other than the United States to be able to keep our existing nuclear fleet as far as our submarines going is concerned. I would think that would be a security issue.

Mr. MOORE. Mr. Chairman, it is. And I take it one step further, as I tried to talk about earlier when I first began the testimony in answer to a question. It is also true for the enriched uranium we use in our civilian power plants. We invented the process. We invented civilian nuclear power plants. Why would we worsen our Nation's energy security by abandoning this process of creating fuel for nuclear power plants and depending upon a foreign source for that, too? That seems to me to be likewise a security issue that makes no sense. And the only way to keep from falling into that trap, we think, is through legislation like this.

Mr. VALENTINE. I don't—as I was saying—I thank the chairman for that encouragement. I was saying, I don't want to be viewed as one who looks unfavorably on this type of energy. I think that we need to develop this source of energy in the United States, and I don't have a lot of patience with people who want to stay cool in the summertime and warm in the wintertime and think we should absolutely discard this source of energy.

But I do want to get back to what we were talking about earlier. As I understand, what we are about is a way to change this enterprise into something that is quasi- governmental and then give it a complete divorce at some time in the future and convert it into a private corporation.

My question is: when that time comes, what about the argument that you have made, Mr. Secretary, about the need to have a domestic source of enriched uranium to run a nuclear Navy? Because if it becomes a private corporation, we know — have reason to expect that one of the next things that might happen, it would be purchased by the Japanese or the Germans. And so what are we doing except going through what might be an expensive process to the taxpayers to get to a time in the future when—I mean, it's not going to be a private corporation now. Maybe in five years. What about our nuclear Navy then?

Mr. MOORE. Congressman, you brought up an excellent point that certainly I don't have an answer for except one that I agree with you 100 percent. I don't think that we'd be in favor at all of selling this off to a foreign country or a foreign buyer.

Mr. VALENTINE. But, you know, this is private enterprise. If it is going to be free, it is going to be free. And if it is not going to be free, I think we ought to start talking about that and face that fact now.

The CHAIRMAN. Will the gentleman yield again, please?

Mr. VALENTINE. Yes, sir, I yield.

The CHAIRMAN. You know, I think he's on a very interesting point. I'm sorry that there aren't more members here. Those are the people who importuned us to hold this hearing. What you see

may not be quantifiable in quantity, but you have here, the members that are here are the quality members.

[Laughter.]

The CHAIRMAN. Therefore, I think the question the gentleman raises is a very interesting one. For example, the issue that was raised by one of the members this morning— two members —was the taxpayers' situation, which is respected and we're going to have somebody from the National Taxpayers Union testify. I think they're next.

But the interesting point to me is that if we have put our eggs in a basket—the nuclear basket as far as our submarines and battleships and so forth are concerned—and the taxpayers are—that's our DOD and our military program — the taxpayers are paying for that issue. It seems to me that if the taxpayers are going to be paying for the submarine issue, which they are, that if we go ahead and do something that is responsible up front we'd be serving both masters and therefore lowering the cost to the taxpayer.

Now, I'm sorry that I can't get a response because those people haven't had time to stay. Is that a reasonable point to make?

Mr. MOORE. You're absolutely correct. I made a statement on that point in the course of somebody else's question and I answered incorrectly. I made the point that if we lose our commercial business in the uranium enrichment enterprise, all we have left is the business that we think is essential, which is continuing to enrich uranium to be used in our nuclear reactors in our Navy. That would increase the cost to the taxpayer $300 million a year. I said it would be a total cost of $300 million. I was in error. The taxpayers are spending right now $120 million a year for those services from this uranium enrichment enterprise. If you don't have any commercial customers, the total cost of running it then falls on the taxpayers to run it for the Navy—

The CHAIRMAN. That's the point I'm making.

Mr. MOORE.—that increases it from $120 million to $420 million. And so yes, the taxpayer gets it right in the ear if you just let this thing run into the ground and maintain it for defense purposes.

The CHAIRMAN. The gentleman from North Carolina?

Mr. VALENTINE. Mr. Chairman, I don't have any other questions about this. I would—I think it is something that we should pursue with the other witnesses.

I would thank the chairman for yielding to me, and thank the chairman especially for the very wise comment as to the caliber of the members who are present for this hearing.

[Laughter.]

Mr. VALENTINE. I would like to have an affidavit to take home on that one.

The CHAIRMAN. I was in Camp Buckner, North Carolina, 1,000 years ago, and there is a great affinity I have for the great sovereign State of North Carolina. I just wanted to reflect that by recognizing the distinguished member, who has been one of our outstanding leaders in the Congress, particularly on this committee and on other areas that I have the great pleasure of working with him. So I want to compliment you for being with us today.

Mr. VALENTINE. Thank you. Do you have that down?

[Laughter.]

Mr. MOORE. Mr. Chairman, I do have an answer. My capable staff that is behind me pointed out that, in answer to the Congressman's question about would we sell this to a foreign source, the Atomic Energy Act prohibits the sale of any nuclear facility—over 51 percent of the enterprise has to be owned by domestic sources. And so we, by existing law, could not do that. And we certainly agree with that.

The CHAIRMAN. The Chair recognizes the distinguished gentlelady from Maryland, Mrs. Morella.

Mrs. MORELLA. Thank you, Mr. Chairman. And I'm glad I was here for that qualitative assessment.

Just very briefly, Secretary Moore, we started talking a little earlier about the Soviet Union and our involvement, and now with Eastern and Central Europe opening up and the assessment of their power plants there may be a lot of dumping with regard to the materials there. How do you see this working out? And do you see some kind of an exclusive agreement with the Soviet Union and the SWUs?

Mr. MOORE. The gentlelady asks a question that concerns us greatly. You are correct. Let me add to it an additional observation.

The Soviet Union is trying now to come into a new day and they realize they need hard currency to do it. They have very little that they can offer the world at this point to gain hard currency—resources, energy. They can sell oil, they can sell gas, and they can sell enriched uranium. And so they are going into the market very aggressively doing that. They really haven't done so much in the past. That's a source of money for them.

They don't really have the same concept of profit and cost that we have. I assure you there is no meeting in the Soviet Union bringing in the operators of their enrichment plant as we are doing here this morning, pounding on are you getting back the interest, is the taxpayer getting their dollar back, have you got this priced correctly. Their object is to go into the market, get the contract at whatever the cost. If they're undercutting everybody, you might be able to call that dumping. And in the United States, just October the 8th in the *Wall Street Journal* we see where the Soviets have signed major contracts with two more major utility companies in the United States selling yet additional sources. Up to this point it has been coming in through the European markets. Now it is more and more beginning to come in directly— direct competition with us. If this continues—quite frankly, if they continue to operate, as state economies often do, without regard to the true profit and loss situation or cost but just dump it in the market to get the business, we're going to suffer and we are going to lose money, and then the taxpayer is going to be faced with a loss.

If I would, while the gentlelady is being so kind to listen to me, I made an error in saying earlier, I think to her comment, that we did not make a net of $90 million in fiscal year 1990 that just ended on October 1st. It was $70 million. I had my numbers transposed. We made $70 million last year, not $90. But we are concerned about are we going to continue to make that. Faced with this kind of competition from the Soviets, if we don't move to begin to make some business decisions in how we are going to run this

enterprise and continue running it as a government, they're going to beat us.

The CHAIRMAN. If the gentlelady would yield for a moment, we will place the article you referred to in the record at this point.

[*The Wall Street Journal* article of October 8, 1990, follows:]

THE WALL STREET JOURNAL.

MARKETPLACE

MONDAY, OCTOBER 8, 1990

Soviets Negotiate Uranium Contract With U.S. Utilities

By Neil Behrmann
Special to The Wall Street Journal

LONDON—A Soviet nuclear fuel processing plant has negotiated a $250 million contract to enrich uranium for four U.S. utilities, says Yankee Atomic Electric Co., a Framingham, Mass., utility company.

It is the first time that a Soviet plant is processing uranium for direct sale in the U.S., said James Vaughan, a senior vice president at Nuexco, a uranium broking company that arranged the deal.

As much as 6,000 metric tons (6,600 short tons) of natural, unprocessed uranium will be shipped from the U.S. utilities to the Soviet Union, Mr. Vaughan said. Ural Electrochemical Integrated Plant, based in Sverdlovsk, a town in the Southern Urals, will then enrich the material into a form that can be used by light water nuclear reactors, Mr. Vaughan said. The Sverdlovsk plant initially enriched uranium for the first Soviet nuclear warheads in 1949, dealers said.

Ural Electrochemical was modernized in the mid-1970s. As a result of new technology, the processing of its nuclear fuel needs only a fraction of the energy used in U.S. plants. If U.S. nuclear fuel processing plants were to fulfill the full enrichment requirements of the four utilities, the costs would be around 25% higher, industry sources said.

The Sverdlovsk plant has already processed uranium for French, Belgian, Spanish and other Western European utilities, a Yankee Atomic spokesman said.

The contract with Yankee Atomic; Vermont Yankee Nuclear Power Corp.; Maine Yankee Atomic Power Co., a subsidiary of Central Maine Power Co; and New Hampshire Yankee, a unit of Public Service Co. of New Hampshire, will be completed between 1994 and 2002, according to the spokesman.

Natural, or unprocessed uranium, is normally enriched for utilities by plants—based in Portsmouth, Ohio, and Paducan, Ky.—that are owned by the U.S. Department of Energy. The U.S. currently is the world's largest supplier of uranium-enrichment services, deriving $1.5 billion annually from selling the services to nuclear utilities, according to the Energy Department. But for the past two years, the Soviets have been cutting into the U.S. market by selling its services cheaper than those offered by the department.

Meanwhile, natural uranium prices slumped to $10.10 a pound at the end of September from $11.50 a pound in August, mainly because of fears that Eastern German producers would dump material on the market.

Uranium prices are likely to remain depressed because of potential Eastern bloc sales and huge international stockpiles, dealers said.

The CHAIRMAN. The gentlelady is recognized.

Mrs. MORELLA. Just simply, that is going to make this government enterprise even more difficult, isn't it? It is another challenge, if you want to call it that.

Mr. MOORE. It is going to make it very difficult for us to make a profit, which means the taxpayers go back at some point not too distant into a situation where the amount of money they are putting up is more than they are getting back. As of right now, they have made a profit by virtue of our profits the last four or five years, but that can turn around very quickly.

Mrs. MORELLA. Sure. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. We have to—are we on the second call or first call? This is the first call. We'll wait for a second call.

Does the gentleman have any questions, Mr. Rhodes?

Mr. RHODES. Thank you. I don't. Just an observation.

Like the rest of my colleagues, I appreciate your comment and I appreciate your holding it until I was back in the room.

[Laughter.]

Mr. RHODES. I'd just like to say that Secretary Moore's testimony here this morning has been extremely helpful to me. I first became acquainted with this proposition two or perhaps three years ago in testimony by the Administration before the House Interior Committee. I will be very candid with you. The first time I was exposed to it I thought it was a pretty bad idea. I have come to the conclusion that I don't think it is such a bad idea at all. I think your testimony and your response to the Committee's questions here this morning were very helpful, and I appreciate that.

Thank you, Mr. Chairman.

The CHAIRMAN. I thank the gentleman.

One more question, and then we'll—so we don't lose this time. As the statement goes, more mistakes are made from lack of facts than from poor judgment. It seems to me in your testimony, at least as you view it from the Department of Energy's point of view, that unless we do some sensible transition it isn't—and therefore whether it goes to an interim step between public and private enterprise and then ultimately to private enterprise, as the world marketplace in competition in our usage deteriorates. This is the point of view of the taxpayer paying for the fuel in effect for the submarines. The same issue would seem to me to ensue as it relates to the recovery costs and the cleanup costs. Where is that going to come from?

So if you—in other words, I don't think that the position has been made clear yet, Henson. In my opinion— now, all these esoteric points so forth and so on—but, factually speaking, has anybody quantified what happens—and maybe we can't do that totally here as—not today, necessarily. But I'm thinking what is the cost relating to our nuclear fuel for our submarines?

Second point: if we do not go ahead, what is the ancillary cost? You have the cleanup cost, you have the decommissioning cost. The whole thing is involved. What is that exposure to the taxpayer?

It seems to me to be axiomatic in saying those are the facts that are before us over here. If we do nothing, the taxpayer—and that's the issue. I hope we can get into that next witness—is exposed to

that. If we take another step in between, we relieve those costs—or at least it appears to be so. Is that a fair commentary?

Mr. MOORE. Mr. Chairman, you're right on target again. We predict right now the cost of decommissioning and cleaning up these facilities from the years of operation will be on the order of $3 billion. We'll have a firm figure in September of 1991 as we are currently studying that in great detail.

The taxpayers right now, if we close down operations, pay for all $3 billion of it coming out of appropriations of the Congress. If we can keep this enterprise profitable, we can begin to take those profits and put that into a fund to clean it up so it won't come out of the taxpayers' pocket. It will come out of the profitable operations, or at least half of it — the part that is attributable to the civilian power industry would be paying for it out of the profits that we earn.

If we go into a non-profitable situation, it is all going to come out of the taxpayers' pocket.

The CHAIRMAN. How do you see the part that is the military, the DOD relationship? How should that be paid?

Mr. MOORE. That's got to come from the taxpayer.

The CHAIRMAN. That's what I mean. Should it come that way?

Mr. MOORE. Yes.

The CHAIRMAN. And therefore the differentiation between those two costs have to be, in effect—

Mr. MOORE. Right now we'd say roughly 50/50, but that's what we intend to really get into in detail in that September of 1991 study.

The CHAIRMAN. Okay. Any further questions at the moment?

[No response.]

The CHAIRMAN. If not, the committee again has to recess. We thank you, Mr. Secretary.

Mr. MOORE. Thank you, Mr. Chairman.

The CHAIRMAN. We appreciate your help and so forth.

The CHAIRMAN. Our next witness when we return will be Mr. Charles Montange, who is the general counsel for the National Taxpayers Union. You'll be up first. Where is Mr. Montange? Is he here?

Mr. MONTANGE. Over here.

The CHAIRMAN. Okay. You're next. We'll return. I ask the Members to please come back as quickly as possible if they can.

[Recess.]

The CHAIRMAN. The Committee will come to order.

Our next witness for today on this very important matter, this very important subject, is Mr. Charles Montange, who is the general counsel for the National Taxpayers Union. We want to welcome you very much and thank you for your patience and indulgence this morning. We'd like to hear your testimony so, if you would, go ahead and proceed as you wish.

STATEMENT OF CHARLES MONTANGE, COUNSEL, NATIONAL TAXPAYERS UNION, WASHINGTON, D.C.

Mr. MONTANGE. Mr. Chairman and members of the committee, my name is Charles Montange. I am counsel to the National Tax-

payers Union, and on behalf of National Taxpayers Union I appreciate this opportunity to appear on their behalf to testify in H.R. 2480, a proposal for restructuring DOE's commercial uranium enrichment program.

With the committee's permission, I'll attempt to condense my written remarks for purposes—

The CHAIRMAN. No objection. The gentleman's statement will appear in full.

Mr. MONTANGE. Thank you, sir.

The CHAIRMAN. The gentleman can proceed.

Mr. MONTANGE. There are two basic points with the committee which the committee should keep in mind when considering any restructuring proposal for DOE's uranium enrichment program, particularly under our current environment.

First, the Federal Government is facing an enormous deficit. Progress on resolving what so far this year has been an intractable crisis has not been terribly productive. Taxpayer liabilities for bailing out savings and loans have escalated faster than proposals, let alone politically- acceptable proposals to cut discretionary spending or to enhance revenues to close the deficit gap.

In this context, now seems hardly the time to foist vast new liabilities on taxpayers—liabilities which are and should be borne by private enterprise—nor is it the time to risk billions in taxpayer assets with little chance of any significant return.

Second, the Federal Government has had a financially catastrophic experience with taxpayer guarantees of business enterprises against downside risk. The massive savings and loan crisis has resulted directly from a lack of market discipline flowing from taxpayer guarantees on investments by depositors in that industry.

We may be on the verge of a similar crisis with respect to commercial banks. Now is hardly the time to insure additional industries with additional taxpayer guarantees against additional disasters in those industries. We simply can't afford it.

In this light, we view H.R. 2480 as an extraordinarily questionable piece of legislation. H.R. 2480 clearly is a negative with regard to the budget. The bill changes existing law, under which DOE is required to recover its costs. It provides that the agency need no longer recover its costs. In addition, it authorizes the write-off—that is, the shift to the taxpayers—of approximately $10 billion in unrecovered costs which DOE was legally charged to recover under section 161(b) of the Atomic Energy Act.

Further, H.R. 2480 authorizes the new commercial uranium enrichment enterprise which it sets up and which will be owned by the government—is a government agency or corporation — to borrow an additional $2.5 billion without any other approval by Congress or the OMB, presumably to construct new capacity in a market already glutted with excess capacity and excess enriched uranium.

Additionally, the bill provides for chronic underfunding of reserves for decommissioning expenses. We estimate that this, alone, will shift an additional $10 billion of those liabilities onto taxpayers' shoulders.

In short, the bill has many features which will add to the deficit. In order to pay for these additions to the deficit, which the bill es-

sentially divests Congress of control over, Congress will have to find billions in program cuts elsewhere. Where will they be from? Social Security or Medicare? The space program? Highway construction? The Navy?

Alternatively, what taxes are proposed to be raised to cover the billions in new liabilities and potential liabilities?

H.R. 2480 is also clearly a negative in light of the savings and loan fiasco. H.R. 2480 repeals the key taxpayer protection provision in section 161(b) of the Atomic Energy Act requiring full cost recovery. It effectively limits the obligation of commercial customers to pay decommissioning costs to about $50 or $60 million per year, a level far below what Smith Barney indicates decommissioning may and will likely cost.

It allows the new Federal Enrichment Agency to take on $2.5 billion in additional debt and to expend its estimated $3 billion in current value—that is a total now of $5.5 billion between the loan amount and the current value— without any Congressional or Executive Branch control.

The new agency will not be subject to true market discipline. The bill does not direct it to profit maximize, but instead it is told to pursue a number of goals which are internally contradictory.

Further, the new entity under the bill has no shareholders with power to enforce a requirement that it profit maximize. To the contrary, the bill provides that at least one member, if not all members, of the governing board of the new entity must be drawn from the utility industry. That is an industry whose interests are diametrically opposed to maximizing the value of the Federal enterprise for the U.S. taxpayer.

In short, the bill puts taxpayer assets at maximum risk without any protection of taxpayer interests against those risks. Taxpayers essentially are told simply to hope for the best.

In an important way, the bill creates a situation worse than the savings and loan bailout. In the savings and loan situation we started with taxpayer guarantees against loss and the mistake was to couple the guarantee with what turned out to be regulatory acquiescence and enormous risk-taking without commensurate market discipline.

H.R. 2480, if enacted, will convert what was represented for 20 years to be an industry guarantee against taxpayer losses into the inverse—a taxpayer guarantee to cover industry losses. And then add to that new taxpayer assumption of risk no responsible market discipline or other protection for taxpayer interests.

In essence, what the bill will do is subject the Federal uranium enrichment enterprise to a lot of pressure—which you have heard today from Mr. Moore and in the questions with Mr. Moore—to lower its prices. But there will be no pressure from below to maximize the value of the organization.

It is a kind of worst of all possible worlds scenario. No private investor would want to get into this kind of mess if it were his assets at stake. Congress should learn from mistakes and not repeat them.

In my closing minutes I'd like to focus on the implications of the Smith Barney report which is being used by proponents of H.R. 2480 as supposed vindication for the bill.

There are two versions of the report: the public version released to the press and the secret version.

The secret version of the Smith Barney report, as Congressman Wolpe has earlier alluded to today, does have features in it which seem to us to severely undercut the rationale being offered for H.R. 2480.

First, the secret, non-public version of the Smith Barney report attributes no increase in value to the Federal commercial uranium enrichment enterprise simply from reorganizing it as a government corporation. In other words, simply calling it a corporation or restructuring it per this bill will not enhance its value. The new entity's cost will not change. They are locked in. They are principally electricity now.

Moreover, H.R. 2480 will limit the new entity's ability to increase its revenue because the bill ratifies and locks the new entity into DOE's existing uranium enrichment contracts, all of which have purported to guarantee a very low maximum ceiling price.

So you have a situation where the bill in restructuring cannot change the cost structure of the new entity and cannot change its revenue stream. Whatever the best that we can do under the bill is exactly where we are at right now.

Second, the secret, non-public version of the Smith Barney report indicates that the two chief things that could be done to increase the value of the commercial uranium enrichment enterprise are: A) to increase price to the maximum ceiling price, and; b) to buy Soviet-enriched uranium for resale. DOE can do both of these things independent of this bill. As has emerged from the testimony today, if they wanted to serve as a marketing agent for some Soviet SWU, they would have to have additional legislation either now or under this bill, and nothing in current law precludes them from increasing their price to the maximum ceiling price right now.

Third, Smith Barney indicates that the maximum present value of the Federal commercial enrichment enterprise, whether in its current form or under the proposed Federal corporation, is the same. It is $3 billion. That's based on the maximum revenue which can be generated under DOE's current contracts if DOE takes Smith Barney's recommendation to increase its price.

H.R. 2480 authorizes borrowing authority of $2.5 billion, which is about the maximum which could be borrowed against the limited revenue stream. The borrowing authority appears to be designed to facilitate construction of new enrichment capacity based on AVLIS technology. The new capacity would be strictly for commercial purposes. It would not and could not produce the highly-enriched uranium needed for defense programs.

Smith Barney indicates that under favorable assumptions AVLIS will add only about $170 million to the value of the Federal enrichment enterprise. Putting $2.5 billion of taxpayer assets at risk through a loan to build excess capacity in what has been already recognized and highlighted today as a glutted and stagnant market is an awfully big gamble for so trivial a payout. The last time DOE invested $2.5 billion in new plant—that was the GCEP facility in Portsmouth—the agency never completed the plant, nor never operated the plant. It instead took a write-off of the whole amount—that is, charge it against the taxpayer.

Now we have an AVLIS proposal. Well, the French have a number of expressions for this kind of thing, the mildest of those is "deja vu." A nice English cliche is "Here we go again."

Further, if a large, new AVLIS plant is built at Oak Ridge or somewhere else, as evidently contemplated by the bill, it will require shutdown of the existing Paducah facility, and we believe curtailment of the Portsmouth operation, as well. Otherwise, constructing AVLIS will assuredly result in a huge loss because we will be operating excess plants all over the board.

Far from being an employment generator, AVLIS, assuming it works, will be at least as much an employment terminator unless it is heavily subsidized by taxpayers.

The market for uranium enrichment is stagnant or declining. There is excess capacity available at home and abroad. The cancellations and reactor shutdowns characterizing the East European nuclear industry are putting even more surplus uranium and enriched uranium on the market, further depressing current spot market prices.

The Wall Street Journal, which you have noted earlier today, carried an article alluding to this market reality only this week. What that article means to us is that now is hardly the time to risk additional taxpayer assets on a new plant or on further subsidies for this enterprise.

If the nuclear utility industry is not concerned whether the Federal Government assures adequate supplies of enriched uranium, then the Federal Government should simply maximize profits under current contracts. No one is talking about suddenly shutting it down tomorrow. All we're saying is maximize profits under current contracts, meet your commitments, charge the nuclear utilities for their share of decommissioning costs to date, and get out of the business.

If the nuclear utility industry is concerned that the Federal Government assure adequate supplies of enriched uranium—that is, they want the Federal Government to be there—then the industry should pay all the government's costs in providing that assurance. There is no reason for taxpayers to be called upon to subsidize what the utilities want.

Additionally, forcing taxpayers to subsidize nuclear fuel costs will only result in gross inefficiencies and add to the deficit. If the utility industry wants a Federal enrichment program, then it should buy from DOE at a price covering costs or it should buy DOE's program, itself. As a corollary, there is no reason for taxpayer assets to be risked on construction of a new AVLIS plant. If AVLIS is a good, economic idea, private industry can and will generate the capital to do it. I stress again that AVLIS is not for defense purposes and it cannot be used for defense purposes. It is purely commercial.

Mr. Chairman, NTU has called for reform and restructuring of the DOE commercial uranium enrichment program for years. Indeed, we think that the idea of doing it in the form of a government corporation which could be privatized was our idea. However, we cannot support a bill which in essence increases taxpayer liabilities and risks for the Federal uranium enrichment program but does not contain any features subjecting the program to any

market discipline to cause it to operate to maximize profits for its owners, the U.S. taxpayer. To the contrary, the bill contains numerous features which march the other way.

Let me reiterate that point. It seems to us to pin the taxpayer to enormous downside risk and, at the same time, offer, even according to Smith Barney, very little prospect of upside gain over what DOE can do right now. And Henson Moore says they have adopted the suggestions of Smith Barney except for acting as Soviet marketing agents. So presumably we are in the best of all possible worlds, even according to Smith Barney, right now. The bill is just to us a dog that does not hunt. We oppose it and we ask that it be rejected by this Committee and by the U.S. House of Representatives.

Now, Mr. Moore has intimated that the bill may somehow enhance the nuclear Navy. We don't understand that. No one believes that the highly enriched uranium circuits at Portsmouth will be shut down whether or not this bill is passed. They will be in operation.

The proponents of the bill and the nuclear utility industry instead urge that under the bill higher prices be charged for military uranium. And if you look at the bill— I think it is section 1507(b)— you'll find that it provides that this new government corporation is, in fact, required to cover all of its costs in supplying highly enriched uranium for military purposes and that the new corporation can charge and get a reasonable profit from the Department of Energy.

There is better protection in terms of assuring it gets a profit from the U.S. government military needs than there is protection to assure that it gets any kind of profit from the commercial side.

As to AVLIS, we've already noted that AVLIS is not designed to produce military fuel in the first place. I'd only add that if the facility is constructed as proposed—a large 9- to 10-million SWU facility—it would require presumably the shut-down of both the currently commercialized gaseous diffusion plants.

One other quick comment—two other quick comments on Mr. Moore's testimony.

Mr. Moore suggests that DOE wants AVLIS in order to pursue market share—anyway, that's how I understood his testimony. Smith Barney has indicated that the strategies designed to enhance market share uniformly decrease the value of the Federal enrichment program for the U.S. taxpayer; that is, they cost the taxpayers money.

Now, he also made some comments and characterizations about where the General Accounting Office is on this question of unrecovered costs. I'd like to read a quote from GAO. "These so-called write-offs result in a shifting of program costs from enrichment customers to the government, that is, the taxpayers. This, in effect, constitutes a subsidization of the enrichment program and contravention of the Atomic Energy Act of 1954 as amended and its legislative history."

Thank you very much, Mr. Chairman. I'd be happy to entertain any questions.

[The prepared statement of Mr. Montange follows:]

NATIONAL TAXPAYERS UNION

A NONPARTISAN, NONPROFIT ORGANIZATION DEDICATED TO THE PUBLIC INTEREST

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Before the

UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY

HEARING ON URANIUM ENRICHMENT RESTRUCTURING PROPOSALS
(H.R. 2480)

Thursday
11 OCTOBER 1990

Testimony of
CHARLES H. MONTANGE, Counsel

NATIONAL TAXPAYERS UNION

TESTIMONY ON BEHALF OF NATIONAL TAXPAYERS UNION

OPPOSITION TO URANIUM ENRICHMENT PROGRAM
BAIL-OUT PROPOSAL (H.R. 2480)

Mr. Chairman and Members of the Committee, my name is Charles H. Montange. I am counsel to National Taxpayers Union, on whose behalf I am testifying today. We appreciate this opportunity to testify on H.R. 2480 in light of the recent report by Smith Barney, Harris Upham & Co. (Smith Barney).

The question before the Committee today involves the civilian uranium enrichment program of the Department of Energy (DOE). The question is economic in nature, and does not involve science policy. The question is simply stated: Should this Committee endorse a $20 billion-plus bail-out of DOE's civilian uranium enrichment program at taxpayer expense, as well as sanction additional billions in taxpayer subsidies and guarantees in the future, as contemplated in H.R. 2480?

There is no reason to opt for this massive new taxpayer liability. There is a vast difference between the savings and loan bail-out and the bail-out at issue here. There was a taxpayer guarantee for deposits in the savings and loan situation, and this unfortunately leaves taxpayers on the hook for the lamentable S & L fiscal disaster. In contrast, there is, and has been, no such guarantee extended to the nuclear fuel industry. Instead, the guarantee went the other way. Under the cost-recovery provisions of section 161v. of the Atomic Energy Act, taxpayers were supposedly guaranteed that they would never be required to bear any of the costs, direct or indirect, of providing uranium enrichment services to commercial nuclear utilities here and abroad.[1] H.R. 2480 would repeal this taxpayer protection guarantee, sanction huge taxpayer subsidies for DOE's accumulated unrecovered costs (about $10 billion) and environmental liabilities (another roughly $10 billion), and essentially place taxpayers in the position of underwriting all future downside risks for the government's uranium enrichment program from this point forward. Given the economically disastrous past conduct of the DOE enterprise, taxpayers can only view this kind of "restructuring" like the Plague.

Something should be done to reform the DOE uranium enrichment program, but there is no legitimate reason to adopt

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[1] See, e.g., Uranium Enrichment Policy, Hearings Before the Subcomm. on Energy Res. & Dev. of the Senate Energy & Nat. Res. Comm., 95th Cong., 2d Sess. at 75 & 88 (1978) (utility representations that they, not taxpayers, would bear all costs).

H.R. 2480. It unequivocally leaves taxpayers worse off than if no restructuring or reform proposal were passed at all. All the high priced consultants retained by DOE, and all the high cost special interest lobbying by the nuclear fuel industry cannot alter that conclusion.

Taxpayers would be better off if DOE simply raised its prices as much as possible to existing enrichment customers and just got out of the commercial enrichment business as existing enrichment contracts expired. There is no supportable public policy reason to insist that taxpayers accept some "solution" making them worse off.

Our time is limited, so we will focus below on some of the major deficiencies in H.R. 2480 and then touch on the Smith Barney Report and its relationship to all this.

I. The Repeal of Cost Recovery.

1. The full cost recovery requirement. Since the Private Ownership Act of 1964, which amended the Atomic Energy Act to include section 161v., DOE was supposed to recover all the costs associated with its commercial uranium enrichment program, both direct and indirect. Taxpayers were supposedly assured under section 161v. that they would never have to subsidize the commercial nuclear fuel industry, or nuclear utilities. Utility lobbyists frequently reiterated the proposition that the DOE program was not at taxpayer expense.[2] Unfortunately, DOE, commencing in 1984, intentionally began a policy of non-recovery of costs.[3] The General Accounting Office (GAO), using methodology long employed by DOE, calculated as of September 1988 that the amount of "unrecovered costs" stood at approximately $10 billion.[4] It increases at a rate of approximately $1 billion per year. In addition, DOE has failed to recover any of the costs associated with decommissioning and cleaning-up its three existing uranium enrichment plants, one of which has already been permanently shutdown. According to DOE consultants, the decommissioning costs are likely to approximate at least $8 billion for the Oak Ridge facility alone, and may

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[2] See note 1, supra.

[3] In response to utility industry lobbying, DOE in 1984 issued a new enrichment contract purporting to guarantee prices below the agency's costs.

[4] Statement of K. Fultz (GAO), in Hearings before the Energy Research and Dev. Subcomm. of the House Science, Space & Tech. Comm., 101st Cong., 1st Sess. at 40 (1989).

easily total $20 billion or more overall.[5] Since half of DOE's uranium enrichment services were sold commercially, half of the decommissioning and clean-up costs should be allocated to commercial customers. The failure to recover the civilian share -- roughly $10 billion -- constitutes another huge de facto taxpayer subsidy contrary to the requirements of section 161v. Indeed, DOE has adopted new uranium enrichment contracts (the so-called "utility services uranium enrichment contracts" or USECs) which purportedly guarantee a maximum ceiling price so low that costs and environmental liabilities cannot be recovered.[6]

2. H.R. 2480 has taxpayers assuming all past unrecovered costs and liabilities. DOE's apologists argue that the agency's failure to recover costs has reached so great a magnitude that it is now impossible for the agency to recover costs and "be competitive." H.R. 2480, embodying this view, essentially "writes-off" all $10 billion in unrecovered costs[7] and provides for recovery of about $50 million per year toward the cost of decommissioning.[8] At this rate of recovery, taxpayers will be stuck with essentially all of the $10 billion "utility share" of decommissioning costs.[9] To quote GAO, this shifting of liabilities "in effect constitutes a subsidization of the enrichment program in contravention of the Atomic Energy Act of

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[5] Compare Smith Barney Report at 77 ("tens of billions") with 82 ($8.103 billion to "greenfield" Oak Ridge plant).

[6] Under USEC, the guaranteed ceiling price has been as low as $119.10. Letter, Mr. Garrish (DOE) to Senator Humphrey, March 25, 1988 (Answer to Q10). Actual average prices have been less than $109 per unit of enrichment. Id. GAO has indicated that at the time, DOE's costs were about $131 per enrichment unit, excluding all depreciation and return on investment. Letter, K. Fultz (GAO) to Cong. M. Udall, April 4, 1987, response to Q4.

[7] Compare § 103 (authorizing various write-offs) with § 102(b)(5) (repeal of cost recovery requirement).

[8] § 1703(a) requires the deposit of 5% of gross revenues into a Fund to cover decommissioning expenses. Gross revenues are approximately $1 to $1.2 billion per year. This produces $50 to $60 million per year for the decommissioning fund.

[9] A $ 50 million annual recovery is less than the rate of inflation which can be expected in decommissioning costs. In any event, it would take 200 years to accumulate $10 billion at a $50 million per year rate, assuming that interest on annual deposits is sufficient to keep pace with inflation in decommissioning costs.

1954, as amended, and its legislative history."[10]

There are alternatives. One very clear alternative is to charge a fee on nuclear generated electricity adequate to generate enough revenue to assuredly recover the utility share of uranium enrichment environmental remedial action costs. This is precisely what is done under the Nuclear Waste Policy Act (NWPA) for disposal of spent nuclear fuel.[11] That statute imposes a 1 mil per kilowatt/hour fee for disposal services. The charge needed to recover the commercial share for clean-up of DOE's enrichment facilities should be no greater than the charge the utility industry treated as insignificant under the NWPA.[12]

3. H.R. 2480 repeals full cost recovery for the future. Under the guise of allowing the new federal uranium enrichment agency more "flexibility," H.R. 2480 repeals all of section 161v. of the Atomic Energy Act, including the cost recovery provision.[13] This is deeply troubling, for it repeals the single most important protection of taxpayer interests germane to the current program. It amounts to a blank check against taxpayer assets left in the DOE program.

H.R. 2480 does not substitute any meaningful protection of taxpayer interests to compensate for the repeal of the cost recovery provision. Rather than set up a business-type entity with a clear mandate to maximize profits, the proposed legislation states that the new agency is supposed to be a

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[10] GAO Letter dated Feb. 19, 1986 [B-207463], at p. 6, citing Uranium Enrichment Services Criteria and Related Matters, Hearings before the Joint Comm. on Atomic Energy, 89th Cong., 2d Sess. 29, 33, 121, 319, 517, and 518 (August 2, 3, 4, 16 and 17, 1966).

[11] 49 U.S.C. § 10222(a)(2).

[12] According to OMB's Budget for the United States, Fiscal Yr. 1991, at p. A-677, a 1 mil/kwh fee on nuclear-generated electricity generates approximately $500 million per year. This sum would be adequate to recover the civilian share of uranium enrichment clean-up expenses, assuming it is accumulated for the next seventeen years (which, according to DOE's 1989 Report at p. 33, is the remaining useful life of its two currently operating enrichment facilities) and that deposits of roughly $50 million per year from gross revenues of the program are also made annually as per H.R. 2480. The additional deposits are necessary in light of probable effects of inflation, as well as the risk that one or more of the plants will be shut down earlier.

[13] § 102(b)(5).

"reliable and economical domestic source of enrichment services"[14], and to maximize things like "long-term returns,"[15] rather than profits. Increasing the amount of "return" or "revenue" of an entity over a long period of time is not a protection for the taxpayer. DOE basically claims to be enhancing its long-term revenues right now, but with huge effective losses for the foreseeable future. The key is to maximize profit and the current value of the enterprise. Anything else puts taxpayers at risk of continued and enormous subsidization of the enterprise.

H.R. 2480 also actually prevents the new enrichment agency from maximizing profits by ratifying DOE's enrichment contracts,[16] all of which contain provisions -- illegal under current law according to GAO -- which purport to guarantee a maximum ceiling price below the level needed to recover the agency's costs.[17]

Finally, H.R. 2480 provides that "at least" one member of the Board must be a current or former full-time electric utility official.[18] This puts "at least" one fox (and possibly as many as five) right into the chicken house, although after all of the other provisions in H.R. 2480 are taken into account, all the chickens may already have been eaten anyway. Why the legislation should embed a clear conflict of interest into its corporate structure has never been explained.

II. New Plant.

In a further effort to render the new enterprise more "flexible," H.R. 2480 authorizes the new enrichment agency to engage in $2.5 billion in off-budget borrowing, secured against the taxpayer assets transferred to the new agency and any revenues it generates.[19] The amount in question is roughly the

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[14] § 1202(7). The new entity must also conform to "the objectives of ensuring the Nation's common defense and security," language which sounds good but which in the past has been interpreted to require the construction of surplus capacity at taxpayer expense.

[15] § 1507(a).

[16] E.g., § 1403(a).

[17] See, e.g., Letter, Comptroller General of GAO to Hon. John Dingell, Dec. 27. 1984, at 9; Western Nuclear v. Huffman, D. Colo. No. 84-C-2315, filed Sept. 18, 1985, Amended Order at p. 3, vacated on other grounds.

[18] § 1501(d).

[19] § 1506.

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amount required to construct a huge new AVLIS enrichment plant. H.R. 2480 provides that the $8 billion decommissioning of the Oak Ridge Plant must be undertaken,[20] evidently commencing within two years,[21] unless enrichment production activities are resumed at the plant. While encouraging the construction of a new AVLIS enrichment plant at Oak Ridge on borrowed money as per this bill may provide jobs for residents of Oak Ridge, it makes no sense for the U.S. taxpayer.

The demand for uranium enrichment services is stagnant. No new nuclear power plants have been ordered in the U.S. since 1978. The United States currently has excess capacity at its two operating gaseous diffusion plants. An AVLIS plant would take business away from these plants, requiring one and perhaps both to be shut down, triggering billions in additional decommissioning costs for the U.S. taxpayer and conceivably driving up the cost of providing enrichment services for military purposes. Further, it is far from clear that an AVLIS plant would in fact be "competitive." DOE's last "new technology" venture -- GCEP -- was an economic disaster, costing approximately $3 billion and producing nothing.

The federal government should not construct <u>any</u> new enrichment facilities for commercial purposes unless (1) someone outside the government puts up <u>all</u> the capital costs as an equity investment or (2) the customers enter into contracts assuring that all costs, direct and indirect, from the new plant are recovered, whether or not the new plant ever produces or is "competitive." Taxpayers on no account should assume <u>any</u> risks for new plant investment in this industry.

Senator Johnston and the utility industry are currently pushing a proposal for a private enrichment enterprise (the so-called LES project) in Louisiana. This illustrates that privately financed domestic enrichment facilities are feasible.[22]

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20 § 1701.

21 § 1704(a) & (e).

22 Although U.S. utilities are evidently participating as equity partners in the LES project (which uses presumably "outmoded" URENCO gas centrifuge technology), according to DOE <u>no utility</u> has expressed any interest to date in participating as an equity partner with DOE in a new enrichment facility. This suggests one of two things: (1) DOE's technology is not what it is cracked up to be; or (2) U.S. utilities think they can maneuver Congress and the Executive Branch into supplying them enrichment services without any assumption by the industry of any downside risk. Whichever explanation applies, the taxpayer is the clear loser.

There is no reason for continued U.S. government involvement in this industry if that involvement entails any risk that taxpayers will face a loss or liability. The U.S. government is not in the business of providing fuel for energy generation in the petroleum or coal industries, and there is no reason for the situation to be any different here.

III. The Smith Barney Report.

In the hope of facilitating adoption of the legislation at issue here,[23] DOE hired Smith Barney, Harris Upham & Co. at a cost of $2.5 million to provide what the agency billed as an "independent" review of DOE's program. The report embodying the review has never been released for public consumption, although a "sanitized" or censored version which omits many key sections was eventually released to the press.

The censored version of the Smith Barney Report released to the public on its face seems to suggest support for the pending bail-out legislation. The censored version of the Report, and certainly the public statements of the Smith Barney witnesses, call for a "write-off" of all $10 billion of "unrecovered costs," suggests that U.S. taxpayers assume all the $20 billion or more of costs of decommissioning the existing DOE enrichment facilities, and encourages the development of a new AVLIS facility. But a different picture emerges when one looks behind the censored version of the Smith Barney Report and analyzes the actual recommendations for business practices contained in the uncensored, secret version of the Report.

In the uncensored, secret version of the Report, Smith Barney's chief business recommendation is that the federal government raise enrichment prices as much as possible. Smith Barney thus far has discretely avoided disclosure of this central recommendation in its public testimony, and certainly the DOE witnesses do not acknowledge it. According to the uncensored version of the Report, if prices are raised, the agency can increase the present value of the program from its current

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[23] On the heels of the Report, the Senate Energy and Natural Resources Committee held a hearing, but declined to invite witnesses opposed to the bail-out legislation. The Committee haled the Report as supporting a bail-out, and pushed the Senate version of the H.R. 2480 bail-out legislation. The Energy Research and Development Subcommittee similarly did not permit opposition testimony on the Smith Barney Report when it was issued, and instead marked up and reported the bail-out within days of the Smith Barney testimony.

basement level to about $2.6 billion.[24] NTU has long urged that DOE raise its prices. We have repeatedly noted that DOE is losing hundreds of millions each year at taxpayer expense.[25]

Smith Barney identifies only two other means by which DOE can increase the value of its enterprise. (1) The first is for DOE to act as a marketing agent for Russian enrichment services. According to the uncensored version of the Smith Barney Report, under certain favorable assumptions, this will enhance DOE's value by about $340 million.[26] NTU has no problem with DOE's acting favorably on this recommendation. (2) The second suggestion in the uncensored report is for DOE to continue exploring an AVLIS facility. According to Smith Barney, under relatively favorable assumptions, the facility may enhance DOE's value by about $170 million.[27] If Smith Barney means to suggest that taxpayers should therefore build more enrichment plants, NTU parts company with Smith Barney. A $170 million enhancement in value is hardly worth the enormous risks associated with taxpayer-underwritten investment in a huge new plant in a stagnant market. In testimony in the Interior Committee, Smith Barney indicated it believed the plant could be constructed by private enterprise.[28] NTU will not oppose a new plant using U.S.

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[24] Smith Barney Report at pp. 99 & 100. Indeed, Smith Barney even suggests that prices be raised in a "low price" scenario. The point is that DOE's current approach of arbitrarily cutting prices below cost is a pointless fiasco which drains resources from the enrichment enterprise at taxpayer expense.

[25] The guaranteed maximum ceiling price is ultra vires and thus not binding on the government under current law. NTU therefore has urged that the price be increased even further. Smith Barney acknowledged that immediately raising prices to a level far above the ceiling price would enhance the value of the DOE enterprise over simply raising prices to the maximum ceiling price. Smith Barney Report at 100.

[26] Smith Barney recommends exploration of this approach at p. 122. The $340 million enhancement in present value is derived from Figure 28 at p. 114. Of course, reliance on Soviet enrichment may lead to shut down of at least one of the currently operating DOE facilities.

[27] The $170 million figure is also derived from Figure 28, supra.

[28] Testifying for Smith Barney, Mr. Frank Zarb acknowledged that a privately constructed plant was an option, although he suggested it might not be "realistic" because the industry has

technology if someone other than the government pays (and guarantees payment of) all the costs, direct and indirect, associated with it.

The uncensored version of the Smith Barney Report ascribes no increase in value at all simply to "reorganizing" the DOE enrichment enterprise in the fashion prescribed by the various bail-out proposals. As a result, the Smith Barney Report, for all the massaging its witnesses give it, affords no economic rationale for bills like H.R. 2480. The Smith Barney report fails to analyze mechanisms, such as a fee on nuclear generated electricity, to recover costs and decommissioning liabilities, apparently because the participants in the Smith Barney report with one exception had a mental block against any proposals or ideas other than those involving taxpayer subsidization of the nuclear fuel industry. The sole exception is that -- as I have indicated -- the uncensored version of the Smith Barney Report did recommend that DOE raise its price to the maximum ceiling price permitted under its unlawful "utility services" contracts.

If the major recommendation for enhancement of the value of the DOE uranium enrichment enterprise is for DOE to raise its prices, then DOE should just do it. Adopting legislation which repeals the full-cost recovery requirement, writes-off all unrecovered costs, fails to fund decommissioning expenses, and otherwise encourages a new enrichment enterprise to cut its prices marches in exactly the opposite direction. In short, trying to support the bail-out legislation with the Smith Barney Report is like pounding a round peg into a square hole. The basic business strategy recommendations in the Report are simply inconsistent with what H.R. 2480 does. The taxpayer is the clear and certain loser.

IV. Conclusion.

Rather than concentrate on bills to bail-out DOE, Congress should force DOE to maximize the value of the civilian enrichment enterprise and to recover costs and environmental liabilities from the customers of that enterprise. The real irony in all this business about the Smith Barney Report is the Report's fundamental business recommendation is that DOE should raise its price. This is what we have been saying for years. Yet the Report is being used in an effort to vindicate a bail-out which

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grown accustomed to government provision of enrichment services as opposed to self-reliance, or reliance on unsubsidized private capital. 31 July 1990 Hearing transcript circa 84-86. But the industry should not be rewarded with further subsidies simply because it has been subsidized in the past. Why should taxpayers underwrite a new plant if the utility industry or other sources of private capital in the market are unwilling to take the risk?

DOE's apologists hope will lead to lower prices and increased taxpayer subsidies. Pardon us, but this kind of reverse logic could only occur in Washington.

Congress should "just say no" to another bail-out. The DOE uranium enrichment program has been a big loser for the U.S. taxpayer. Offering up further taxpayer funds to the program as per H.R. 2480 just makes a bad situation worse.

NTU supports "reform" and "restructuring" of the program; we do not support a multi-billion dollar bail-out. We hope that the Committee will agree, and will give the American taxpayer a break on this one.

Appendix I
Unrecovered Costs

A.

Under section 161v. of the Atomic Energy Act, 42 U.S.C. § 2201v., the Department of Energy is supposed to recover all the costs associated with the civilian uranium enrichment program. Since the inception of that program, these costs have included depreciation of assets and interest imputed on the value of those assets. The question of unrecovered costs is not an issue invented by the General Accounting Office (GAO), anti-nuclear advocates, or some other nefarious body as is often intimated by apologists for the Department of Energy (DOE). To the contrary, the basic level of "unrecovered costs" flows directly from DOE's public pronouncements in its uranium enrichment annual reports, in the President's Budget, and in Federal Register notices. For example, DOE in its 1983 Annual Report acknowledged that "government investment" -- a euphemism for "unrecovered costs"-- totalled some $6.936 billion as of September 30, 1983. In a Federal Register notice published January 29, 1986, DOE explained that the level of "unrecovered costs" stood at $7.522 billion as of September 30, 1985.[1] In its 1985 Annual Report, DOE announced that it was "writing-off" about $4.1 billion, leaving "government investment" at approximately $3.4 billion for recovery. GAO, noting that a government agency legally required to price so as to recover its costs cannot arbitrarily decide to "write-off" costs, calculates that, without the write-off, "government investment" stood at $9.6 billion as of September 30, 1988.[2]

B.

The nuclear utilities claim that they "have paid their full share of all past costs and are not responsible for any debt."[3] The utility arguments, portions of which are inconsistent, are as

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[1] 51 Fed. Reg. 3629.

[2] See H.R. 2480--The Uranium Enrichment Reorganization Act, Hearings before the Energy Research and Dev. Subcomm. of the Science, Space and Technology Comm., 101st Cong., 1st Sess. 40 (1989) (statement of K. Fultz, GAO).

[3] See id. at 79 (statement of J.M. Farley on behalf of American Nuclear Energy Council and Edison Electric Institute).

follows:

1. The prices utilities paid were based on methodology reviewed and approved by GAO and the Joint Committee.

True, until the issuance of DOE's generic "utility services enrichment contract" (or "USEC") in 1984. In USEC, DOE abandoned the pricing methodology reviewed and approved by GAO and the Joint Committee. USEC was based on huge de facto "write-offs."

2. The full cost recovery requirement of section 161v. is just a guideline; nothing really requires cost recovery.

False. This is revisionist history and a flat disavowal of what the utility industry said section 161v. meant from 1964 through 1984. No express payment is required to the Treasury, but this is to permit flexibility for re-investment in the program. However, all re-investments remained subject to the paramount requirement of cost recovery. This was the consistent interpretation of the law by GAO, by DOE's predecessors, and, until 1984, by DOE. Additionally, this interpretation was propounded by the nuclear utilities until 1984.

3. Utilities' obligation to repay is limited to their government enrichment contracts and they never agreed to pay more.

False. An ultra vires government contract is not enforceable against the government. Utilities for twenty years embraced the full cost recovery requirement of section 161v. Only now are they disagreeing with that commitment.

4. The government's interest is like an equity holder, not a bondholder, and thus is not a 'debt' but an amount at risk which is now lost to its owner.

The first thing to note about this argument is that it effectively admits that there has been a loss. Aside from this admission, the argument is beside the point. Section 161v. and implementing criteria, expressed in rules, provided that the federal government, like a bondholder, or an equity holder in a utility, would obtain a 'reasonable return' on investment. Not only are utilities arguing against any return on the investment, but they are arguing that the entire investment should be "written-off." This is simply a convoluted way to call for a huge taxpayer subsidy.

5. The enrichment program serves U.S. defense and non-proliferation goals as well as commercial goals, and thus taxpayers should subsidize prices for commercial users.

Of course, taxpayers should pay for the defense share of enrichment costs. However, according to GAO and DOE statements, taxpayers already have paid or will pay for all the defense share. Although some adjustments may be

appropriate, the vast bulk of the enormous 'unrecovered cost' figure of $10 billion is properly attributable to commercial operations. Additionally, commercial customers have not paid their share (indeed, for practical purposes have not paid any share) of decommissioning expenses. This violates section 161v. of the Atomic Energy Act, a provision the utilities have heretofore supported.

c.

The Smith Barney report uses a somewhat different approach to the question of "unrecovered costs." First, Smith Barney argues that the question of "unrecovered costs" are a distraction. According to Smith Barney, the important issue is how to restore DOE's program so it can compete. Smith Barney in public testimony implies that this can be done only by government assumption of all past environmental liabilities (i.e., the entire $20 billion in unfunded decommissioning costs) as well as the $10 billion in unrecovered costs because otherwise the federal program would not be competitive.

This Smith Barney suggestion can be addressed at two levels. First, in the version of the Smith Barney report which is uncensored but which has been concealed from the public, Smith Barney recommends that DOE raise its price to the maximum. See Smith Barney report (uncensored version) at 99 & 100. Smith Barney indicates that this recommendation is the chief means by which the value of the DOE program can be enhanced. See Smith Barney report (uncensored version) at Figure 28. This recommendation is clearly consistent with at least partial recognition of the "unrecovered costs" and at least partial recovery of the utility share of decommissioning costs.

Second, at the very least, the amount of unrecovered costs is a measure of the taxpayer subsidy for the DOE program to date. As such, it is a value which should not be ignored in the discussion concerning what to do with the DOE program.

Smith Barney also argues that the $10 billion in unrecovered costs is miscalculated and that the utility industry in reality has paid its share of costs. To date, Smith Barney witnesses have been unable to support this position in their oral testimony. The Smith Barney report makes clear that the claim that utilities have paid their share of costs is based on a whole series of arbitrary policy judgments concerning a re-allocation of costs from the utilities to taxpayers which even DOE in the past has rejected or which are up to Congress to make. For example, according to a June 8, 1990, letter from Coopers & Lybrand (a Smith Barney sub-contractor), Smith Barney would arbitrarily assign to taxpayers at least one-half of the costs associated with the industry-sought investment in what is now clearly excess commercial capacity. There is no legal or a

priori reason to place this burden on taxpayers other than to subsidize the commercial sector. Smith Barney also attempts to reassign to the defense side some costs currently assigned to the commercial side. In the past, as partially recognized at p. 28 of the pertinent appendix in the Smith Barney report, DOE has rejected such reassignment, contending that any adjustments would be relatively trivial (only about $10 to $15 million per year). Additionally, Smith Barney lowers the imputed interest rate, and confers additional benefits on utility customers from DOE's use of the federal uranium stockpile -- a use, incidentally, to which NTU has previously objected as the equivalent of cream-skimming. These "adjustments" are not clear on their face; to the contrary, they for the most part appear arbitrary and unnecessarily favorable to one side at taxpayer expense.

The CHAIRMAN. I thank you very much. Now for questions.

The gentlelady from Tennessee?

Mrs. LLOYD. Thank you very much, Mr. Chairman.

Mr. Montange, do you consider yourself anti-nuclear?

Mr. MONTANGE. No.

Mrs. LLOYD. What is there about nuclear power you like?

Mr. MONTANGE. I personally, Madam Chairman, think that nuclear power offers the opportunity to have an environmentally clean source of energy.

Mrs. LLOYD. You like nuclear power plants then?

Mr. MONTANGE. I think that nuclear power plants of safe design hold great promise for the world's energy future.

Mrs. LLOYD. You like nuclear fuel?

Mr. MONTANGE. I've never personally met any nuclear fuel I didn't like.

[Laughter.]

Mrs. LLOYD. Do you like nuclear utilities?

Mr. MONTANGE. I generally like nuclear utilities except where they ask for taxpayers to subsidize them.

Mrs. LLOYD. Mr. Montange, do you believe we can extract all of our unrecovered costs and the decontamination and decommissioning costs and still be competitive?

Mr. MONTANGE. Madam Chairman, I do not believe that the U.S. Government under current law, unless DOE changes its implementation—and certainly I do not believe that it, under the bill that is before this Committee, will ever be able to recover the unrecovered costs and decontamination expenses.

Mrs. LLOYD. If we do not restructure the enterprise, where do you recommend we go?

Mr. MONTANGE. Madam Chairman, if we don't restructure the enterprise I would recommend, and the National Taxpayers Union would recommend, that we pursue the Smith Barney recommendations: A) that DOE maximize its prices under its existing contract and would continue to operate until those contracts expire, and B) look into serving as a marketing agent for Soviet uranium in order to enhance the value of the enterprise for the U.S. taxpayer. Those are the two steps that will result under the way this thing is currently being administered in increasing the value of the enterprise and doing something to abate the enormous unfunded liabilities for decommissioning and environmental remedial action and unrecovered costs.

Mrs. LLOYD. Well, I can tell you, Mr. Montange, I do not want to look to the Soviet Union for our supply of nuclear power for our domestic uses or for our military uses.

Thank you very much, Mr. Chairman.

The CHAIRMAN. The gentleman from North Carolina is recognized.

Mr. VALENTINE. Mr. Chairman, just briefly, to push a little bit further what Mrs. Lloyd was getting at, what about these energy sources for military and Naval operations? What are we to do if we—are we to abandon nuclear-powered vessels or are we to be dependent on the Soviet Union or Red China for their fuel?

Mr. MONTANGE. No one suggests that, Mr. Representative, and certainly that isn't the position of the National Taxpayers Union.

What we would envision is that the operation would essentially, over the short-term, continue exactly as is and, in the longer term, if DOE is correct that all its customers will flee in five to ten years, then you would still have the existing plant at Portsmouth which produces the highly-enriched uranium. Those circuits could be preserved there and operated only from time to time.

You have to realize that the amount of highly-enriched uranium required by our nuclear Navy is relatively minuscule compared to the amount of commercial uranium enrichment services being provided by the DOE facilities.

It could easily be stockpiled. You can operate those plants—the plant—relatively inexpensively from time to time to generate the additional HEU that we may need from time to time.

We see no catastrophe flowing therefrom, and we have been told privately by sources inside the government that there would be no military disaster that would flow therefrom.

Mr. VALENTINE. You have been told by sources within the government that there would be no military disaster?

Mr. MONTANGE. That's right, that there would be—that we would be able to take care of our needs for military purposes without having to operate the existing plants for commercial purposes.

Mr. VALENTINE. Well, I obviously misunderstood you because I thought that you said, sir, to the previous question earlier, that you were in favor of the government getting out of the business, and we have become—we handled—

Mr. MONTANGE. No. She asked the question "If we don't restructure, what would you do?"

Mr. VALENTINE. Yes.

Mr. MONTANGE. NTU is on record of favoring restructuring. We just don't want to be restructured and killed at the same time.

What we would say is—and my comment on the Soviet uranium was to treat it strictly as a commercial venture. The utilities are in here saying "We want this enterprise to behave in a business fashion." Every business I know, when it sees that it can import a commodity that it is producing at a price that is less than it costs it to produce it, or what you can buy it from another source, will certainly very seriously analyze and usually pick purchasing it from another source. It is called "out-sourcing." If they don't do that, they fear they will be faced with a stockholders' derivative suit because they are squandering their shareholders' assets.

If you are going to operate this as a business enterprise, operate it as a business enterprise. That means maximize the value for the shareholder—the U.S. taxpayer. If you are going to operate it for some other purpose— energy security in some vague fashion, or to create employment over here, or to make the nuclear utility industry in some state feel good—then say that you are doing that, and then you consider whether or not you want to charge a fee to the beneficiaries of that action that is at least commensurate to your cost of production.

Our basic position is: either maximize profits and treat it as a business entity, or require the utilities to pay the full cost the government incurs in providing the service to them. That, to us, is not an unreasonable position. Indeed, it is the only reasonable position when we are faced with a huge and growing deficit.

Mr. VALENTINE. One final question: when you stated your position with respect to nuclear energy and nuclear power plants and that sort of thing from when Mrs. Lloyd asked the question, were you giving your personal opinion or the opinion of the—

Mr. MONTANGE. The National Taxpayers Union is and has to be neutral on that. They are not an energy group, per se. I'm speaking as to my personal opinion. I have provided the committee with a biographical sketch which includes all of my writings in the area of nuclear energy. I invite you to review that and decide for yourselves whether I am anti- nuclear or not.

Mr. VALENTINE. I don't know that I need to do all that. I'll just take your word for it.

[Laughter.]

Mr. VALENTINE. I yield back the balance of my time.

The CHAIRMAN. I thank the distinguished gentleman from North Carolina.

The Chair recognizes the distinguished ranking member of the Committee, Mr. Walker, from Pennsylvania.

Mr. WALKER. Thank you, Mr. Chairman.

What is the advantage to the taxpayer if the UEE loses its civilian market and operates primarily for defense purposes?

Mr. MONTANGE. Well, there is no advantage to the U.S. taxpayer if that occurs unless DOE in the interim maximizes profits. According to Smith Barney, the rational approach, the business approach for the UEE right now, whether there is restructuring or not, is to hike its price up to the maximum. They recognize—Smith Barney recognizes that utilities, realizing this is occurring, may leave DOE.

However, because of the way an economist or businessman would look at this enterprise, maximizing your profits over this interval when these utilities are bound to DOE under firm contracts—they can't get out without paying the penalty— that the economically rational thing is to maximize your profits now.

We heard testimony this morning from Mr. Moore, himself, who said the spot market price for enriched uranium is at $50 a SWU. That, Mr. Walker, is, as I understand it, lower than, or at least in the very same range as the best projections for the cost of producing enriched uranium under AVLIS.

If you are faced with a market in which you can't even beat it with your best technology, you better maximize profits now. That's our point.

Mr. WALKER. But the fact is that there is a real chance that we could end up with a higher incremental cost per SWU in the end; isn't that right? And that would be a burden that would be borne by the taxpayers?

Mr. MONTANGE. Ten or 20 years from now that is a possibility. But, as Smith Barney has indicated, even assuming what you said, and even assuming AVLIS works out to the best estimates they could come up with, the net increase in value for that gamble is $170 million.

Now, if you are an investor and you have just seen this enterprise which doesn't have to recover its costs any more, have just seen it lose $2.5 billion on the last set of new technology it sought to implement—didn't even operate the plant, wrote it all off against you—and then it wants to invest in a new plant when the

market is worse now than it ever was when it got into the original losing situation, what would you do? Would you think it a good risk? Well, you might, knowing that you could sue the suckers and say, "Look, you have to profit maximize 10 years, 20 years down the pike." But we can't do that. Under this bill there is no requirement for them either to recover their cost or profit maximize. There is no discipline for them to do AVLIS in a fashion that would make it work, in addition to the basic risk that it may not work technologically, someone may come up with a better idea, or someone like the Soviets will be out there undercutting it 20 years from now. There are a lot of risks, and there is very little reason to believe that the best case is going to prevail.

Mr. WALKER. You may have commented on this earlier— and if you have, you may be brief—but I'm interested in the $2.5 billion of borrowing authority for the AVLIS that is contained in the proposal. As I understand it, that would be borrowed from the treasury, but that ultimately the obligation would be to the taxpayers on that borrowing authority. Would you comment on that, please?

Mr. MONTANGE. Mr. Chairman, to us, in a way, it doesn't make any difference whether they borrow it from the treasury or on the open market. It is a government corporation that is doing the borrowing.

If they cannot make the payments, all the assets that are taxpayer assets being transferred to this entity will be at risk to assure that the obligation is discharged.

In addition, for the very same national security reasons that have been cited earlier today as a reason to do this restructuring, we would expect that, regardless of what the bill says on who is to pay the obligations for the debt if it turns sour, that the U.S. taxpayer would ultimately be called upon to stand behind those obligations, just as the U.S. taxpayer is being called upon to stand behind S&Ls in amounts greater than the $100,000 per deposit that are—the formal legal assurance that we have allegedly provided.

Mr. WALKER. Thank you, Mr. Chairman.

The CHAIRMAN. I thank the distinguished gentleman from Pennsylvania.

Any further questions?

[No response.]

The CHAIRMAN. The Chair wants to thank the gentleman very much for his patience and his indulgence. We appreciate your testimony.

Mr. MONTANGE. Thank you, Mr. Chairman.

The CHAIRMAN. The Chair would now recognize for our next witness Mr. William Timbers, the managing director for Smith Barney, Harris Upham & Company. Mr. Timbers, as I understand, was the first project leader on the independent financial assessment. We're most anxious to have you with us and hear your testimony. We are delighted to have you with us.

I think it would probably be profitable for everybody involved if we will include your statement in full in the record and then you can sum up the highlights, if you will.

STATEMENT OF WILLIAM H. (NICK) TIMBERS, MANAGING DIRECTOR, SMITH BARNEY, HARRIS UPHAM & CO., INC., NEW YORK, NEW YORK

Mr. TIMBERS. Thank you, Mr. Chairman. That's exactly what I was planning to do.

The CHAIRMAN. I'm glad.

Mr. TIMBERS. I was going to suggest that I go through this fairly briefly, but I thought there were some key points that would be worthwhile to bring up. And I thank you for the opportunity to appear here today.

As we know, the UEE was created in the 1950s for military purposes. It was a time that the United States had a monopoly in the business at 100 percent of the production of uranium enrichment. Today the market share stands at 45 percent.

In this context, what is the background problem in which we are looking at this bill? We have intense competition in the marketplace. This intense competition will continue. There are significant existing inventories. There is excess enrichment capacity.

This trend to long-term contract terminations will continue as exists right now.

There is a growing spot market of enriched uranium that has begun to develop which utilities believe to be both broad and reliable.

Furthermore—and this is key to really your consideration that the UEE is responsible for very significant current and future environmental cleanup costs that are associated with the continuing operations, as well as the cost associated with decommissioning and decontamination.

Now, these are important because these costs are going to exist regardless of what this committee and what this Congress decides to do.

After assessing these issues, we have concluded—Smith Barney—in our analysis that the best way to maximize the value of the enrichment operations to the treasury and to the taxpayer and to achieve the other goals that we have identified in our report is to establish a true business enterprise in private sector. Fundamentally, a private entity would be the most viable form of business that could compete effectively in the global market.

However, Mr. Chairman, I think this gets to your question that you asked earlier. We don't think that an immediate transfer would be practical due to several reasons, and these include the UEE's current organizational structure, unknown contingent liabilities, the absence of clear regulatory requirements for existing and new technology, the lack of a commercial track record, and uncertainties associated with the evolving short-term spot market for enriched uranium.

Furthermore, because of these factors the sale of the UEE to the private sector at this time would result in significantly less than the optimal value to the treasury.

As a result, Smith Barney and the project team recommended as a first step the transfer of the UEE to a newly-created government corporation similar to H.R. 2480. We believe that some of the issues that I have identified in terms of the trouble in accessing into the

private marketplace today could be addressed on an interim step through this government corporation.

A number of issues have been raised today regarding some factors of the business operations for UEE, and I thought that I might address those very briefly in terms of what our perspective has been.

On AVLIS, based upon our analysis and information provided by a technical panel, we concluded that the AVLIS technology is sound and its deployment as commercial enrichment technology is possible. While we concluded that the planned development of the program to demonstrate AVLIS is reasonable, we also believe that the schedule for AVLIS commercialization is ambitious due largely to difficulties in obtaining various regulatory and environmental approvals.

We believe that the continued development and subsequent deployment of AVLIS, together with its related costs and risks, should be the responsibility of a new government corporation. In this manner the future use of this technology will be based primarily upon commercial considerations rather than upon the conflicting political factors that we have discussed here today that have influenced other UEE capital investments.

Environmental costs: basically, we went through a very detailed analysis of environmental costs. We have determined that the amount and magnitude of these costs on an ongoing compliance basis are unknown today. We are unable, nor is DOE able to quantify what those costs are. We suggest strongly that there be a further investigation to quantify and allocate those costs between prior operations and current operations.

A lot has been said about decontamination and decommissioning. This factor concerns the magnitude of handling D&D costs. Based upon the documents supplied by DOE and Martin Marietta, and interviews with members of both entities, Smith Barney and the project team determined that D&D cost estimates presented today cannot be relied upon with any degree of certainty. I have heard today the Smith Barney report quoted as to what we feel the D&D costs are going to be — that they are going to be low, they are going to be high, there may be a certain amount for Oak Ridge, there may be a multiple of that for all of the enrichment facilities.

I think what is important to put into the record here today is that, based upon our analysis, there is no known quantity for what those D&D costs are going to be.

Mr. Chairman, today we just do not know. DOE does not know. Other entities do not know as to what these D&D costs are. We have not determined how they should be allocated between military and commercial purposes. We have not determined how the commercial purposes of D&D should be allocated between past customers and current operations.

That's an important point in this consideration because I have heard a lot discussed about it. In terms of quoting our report, let me represent in terms of the primary author of this report that we don't know what the D&D costs are. We have recommended a study be performed to determine those.

Now, one of the most important subjects in this issue is unrecovered costs. Mr. Chairman, after careful analysis, Smith Barney and

the project team have concluded that this preoccupation with how to divide the cost detracts from the central question of how to best ensure that there is something to divide. In the reality of today's competitive uranium enrichment market, the questions are no longer how much should you charge, but rather how much can you charge in an effort to maximize profits; not how best to share past costs, but rather how to best minimize current and future costs so as to generate profits. In assessing the economic feasibility of restructuring the UEE, our basic tenet was the determination that a theoretical payback of unrecovered costs to various parties will have little meaning if the entity responsible for the repayment is not alive, well, and generating profits to support a payback.

Thus, it is important to put the debate over unrecovered costs in the proper context. Whether or not the U.S. Treasury is being dealt with fairly in terms of the pricing of SWU is important to government officials and others who are concerned with the restructuring of the UEE. However, as a benchmark, the actual price to be charged in a competitive marketplace with overcapacity, this issue on unrecovered costs is irrelevant and potentially misleading in terms of creating a business-oriented entity with the objective of maximizing the return to the U.S. Treasury and maximizing the return to the taxpayer.

Utilizing the independent expertise of Coopers & Lybrand, Smith Barney and the project team determined and analyzed the full range of cost involved in this debate. The project team analysis showed that there was no unrecovered cost and, in fact, there has been an over-recovery of $1.170 billion.

The CHAIRMAN. Are you concluded?

Mr. TIMBERS. Mr. Chairman, I'd like to just make a few comments regarding H.R. 2480.

We will submit, if the committee wishes, a detailed analysis of a point-by-point investigation of 2480. There are two major points I'd like to make about 2480. One is in terms of the bonding authority that has been mentioned here today — bonding authorities indicated in the bill for $2.5 billion to be financed on the revenues of the government corporation. Now, our aspect about the bonding authority or observation is that $2.5 billion in our opinion probably is not going to finance the full capital cost of both developing and deploying AVLIS.

If you are going to have an entity that is going to be responsible for financing it, we suggest that it have sufficient bonding capability to take care of the full cost and not have to come back to Congress at a later point in time to meet that. We would recommend a higher amount than $2.5 billion.

The second thing is that H.R. 2480 does not address interim funding requirements for the government corporation. Say, for example, that the government corporation is put into place on January 1. This government corporation does not have the capability to go into the capital markets. This government corporation does not have the capability to raise capital in public or private sources on its own. It needs to have some interim funding mechanism to allow it to finance its ongoing reoccurring capital costs outside of the AVLIS program. That is that we would recommend that it have some ability to access the Federal Financing Bank or loans from

the treasury for an interim period for a limited amount so as to let them carry on their ongoing operations while they develop a process for securing capital market access—public or private.

The second point about 2480 that we have a concern about is the funding mechanism for D&D. The 2480 has in it at this time a mechanism in which 5 percent of the revenues of the enterprise would be used to fund a D&D fund. We believe strongly, as I indicated, that there is no knowledge about what that D&D amount is. We think that there ought to be flexibility to allow changes to how the funding mechanism is established or be silent on it now and to address it at a later point in time.

It is important to note that the implementation and this restructuring recommendations will not necessarily result in near-term, magic transformation of the UEE into a dynamic business enterprise, but rather it is the best way, in my opinion, to provide for the necessary operating efficiencies and financial flexibility to compete in a highly-competitive world market. It is the best way to maximize the value to the treasury and to the taxpayers.

It will take some time to implement these changes and to realize the benefits of restructuring; however, if the United States is to be competitive in the mid-1990s, now is the time to effect these changes. Failure to act now will be a clear signal to both competitors and customers that the United States does not intend to be a long-term player in this business. Customers will decide that they can no longer rely on the UEE to meet the requirements and they will continue to cancel their contracts. The U.S. will lose market share rapidly as competitors jump in to serve the UEE's former customers.

Mr. Chairman, this may be a grim picture, but the worst part is the U.S. taxpayer will be the real loser. With diminished revenues, if any, and with little opportunity to finally sell this enterprise to the private sector, the taxpayer will still have to foot the bill for the environmental and D&D sunk costs. Also, there will be no commercial revenues to help defray the cost for our military enrichment services. Consequently, we believe that the taxpayer will be better served if the UEE is transferred to a new government corporation.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Timbers follows:]

Testimony of

William H. Timbers, Jr.

Managing Director

Smith Barney, Harris Upham & Co.
Incorporated

before the

Committee on Science, Space and Technology

U.S. House of Representatives

October 11, 1990

TESTIMONY OF

WILLIAM H. TIMBERS, JR.
MANAGING DIRECTOR
SMITH BARNEY, HARRIS UPHAM & CO. INCORPORATED

ON THE

DEPARTMENT OF ENERGY'S URANIUM ENRICHMENT ENTERPRISE AND THE URANIUM ENRICHMENT REORGANIZATION ACT - H.R. 2480

BEFORE THE

COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES

OCTOBER 11, 1990

Mr. Chairman and Members of the Committee:

I appreciate the opportunity to appear before you today to present the testimony of Smith Barney concerning the Department of Energy's Uranium Enrichment Enterprise (or the "UEE" as I will refer to it) and your consideration of H.R. 2480. As you are aware, Smith Barney conducted for the Department of Energy an in-depth, independent financial assessment of the UEE earlier this year.

I would like to first describe our view of the challenges the UEE faces today and will be facing in the future, because any restructuring must be responsive to these challenges.

The UEE was originally created in the 1950's to serve the military requirements of the Government. Today, however, commercial utilities are its principal customers. In less than twenty years, the UEE has gone from a position of near global monopoly in supplying enriched uranium to the non-communist world to a current market share of approximately 45 percent.

Intense competition in the marketplace will continue. This is due to significant existing inventories and excess enrichment capacity, with very little increase expected in world demand through the end of the century and beyond. Utilities that purchase the UEE's enriched uranium have begun to notify the DOE that they intend to terminate their long-term contracts. This trend toward terminations is expected to grow.

A significant low-cost spot market for enriched uranium has begun to develop, which utilities believe to be both broad and reliable. This movement toward a short-term market has been accelerated by the sale of low-cost inventories by foreign suppliers. The depth of existing spot supply and unused production capacity have caused a growing number of utility customers of the UEE to conclude that there is little risk of a supply failure. Therefore, they view spot market purchases at reduced prices as not only reliable but also cost-effective and prudent. As this market develops further, it will put additional pressure on both the UEE's market share and revenues.

Furthermore, the UEE is responsible for very significant current and future environmental clean-up costs that are associated with continuing operations, as well as the costs associated with the ultimate decommissioning and decontamination requirements for the UEE's enrichment facilities.

It is these challenges, among others, that set the stage for a thorough and timely review of the optimal business structure of the UEE for future competitiveness that was conducted by our firm.

After assessing these challenges and evaluating the uranium enrichment market, Smith Barney concluded that the best way to maximize the value of enrichment operations to the Treasury, and to achieve other goals, is to establish a true business enterprise in the private sector. Fundamentally, a private entity would be the most

viable form of business that could compete effectively in the global market. However, we believe that such an immediate transfer would be impractical due to, among other reasons, the UEE's current organizational structure, unknown contingent liabilities, the absence of clear regulatory requirements for existing and new technology, lack of a commercial track record and uncertainties associated with the evolving short-term/spot market for enriched uranium purchases. Furthermore, because of these factors, the sale of the UEE to the private sector at this time would result in significantly less than optimal value to the Treasury.

As a result, Smith Barney and its Project Team recommended, as a first step, the transfer of the UEE to a newly-created government corporation. We believe it is critical to establish this proposed government corporation in a manner that will permit it to operate in a business-like fashion. This necessitates that the government corporation, to the maximum extent possible, operate outside the political and bureaucratic environment that has historically affected the business operations of the UEE. This can best be accomplished by forming the new government corporation with an organizational structure and other corporate attributes as close as possible to those of a private corporation. In addition, it is imperative that the corporation be free of those administrative and financial controls that constrain the operational efficiency and financial flexibility of a government agency.

Let me take a moment to address a few key factors that will certainly affect the future commercial viability of this enterprise.

AVLIS

Based on our analysis and information provided by an independent technical Panel, we concluded that the AVLIS technology is sound and its deployment as a commercial enrichment process is technically possible. While we concluded that the

planned development program to demonstrate AVLIS is reasonable, we also believe that the schedule for AVLIS commercialization is ambitious, due largely to difficulties in obtaining environmental and regulatory approvals. Even with the higher adjusted costs provided by the Panel and the expected schedule uncertainties, we concluded that AVLIS is still the most attractive enrichment technology over the long run. However, the Project Team is concerned whether this technology can be commercially deployed in a timely manner to achieve its potential. As a result, the Project Team recommended that the development, deployment and licensing of AVLIS be accelerated, where possible.

The Project Team also believes that the continued development and subsequent deployment of AVLIS, together with the related costs and risks, should be the responsibility of a new government corporation. In this manner, the future use of this technology will be based primarily upon commercial considerations rather than the type of conflicting political factors that influenced other UEE capital investments.

Soviet Supply

Our analysis indicated that the pricing of Soviet SWU is not driven by cost recovery or other conventional market principles but, rather, by a desire for hard currency. Because of this, attempts by the UEE or a restructured government corporation to compete on price would be fruitless and would be likely to result in a downward price spiral. Instead of engaging in price competition, Smith Barney believes that the UEE or a restructured government corporation can significantly improve its position by directly purchasing Soviet SWU and negotiating a concomitant reduction in additional Soviet sales.

Unrecovered Costs

After careful analysis, Smith Barney and its Project Team have concluded that this preoccupation with how to divide the costs detracts from the central question of how best to insure that there is something to divide. In the reality of today's competitive uranium enrichment market, the questions are no longer how much *should* you charge, but rather how much *can* you charge in the effort to maximize profits; not how best to *share* past costs, but rather how best to *minimize* current and future costs so as to generate profits. In assessing the economic feasibility of restructuring the UEE, our basic tenet was that the determination of a theoretical payback of unrecovered costs to various parties will have little meaning if the entity responsible for the repayment is not alive and well and generating profits to support a payback.

Thus, it is important to put the debate over unrecovered costs in the proper context. Whether or not the U.S. Treasury is being dealt with fairly in terms of the pricing of SWU is important to government officials and others who are concerned with restructuring the UEE. However, as a benchmark to the actual price to be charged in a competitive marketplace with overcapacity, this issue is irrelevant and potentially misleading in terms of creating a business-oriented entity with the objective of maximizing return to the U.S. Treasury.

Utilizing the independent expertise of Coopers & Lybrand, the accounting firm that was part of Smith Barney's Project Team, the full range of costs involved in this debate was reviewed and categorized.

The work of the Project Team shows that there is no unrecovered cost and, in fact, there has been an over-recovery of $1.170 billion.

Environmental Costs

Although the DOE has recently embarked on comprehensive investigations and plans to bring the GDPs into full compliance with environmental requirements, the UEE has only begun to deal with some of the more difficult problems.

Based on the work done to date, it is not possible to calculate all the future expenditures that will be needed to satisfy environmental requirements, or to quantify the broad range of contingent and other liabilities, with a reasonable degree of certainty. It is clear that much more work needs to be done to clarify the regulatory regime applicable to the GDPs. The ultimate liability on the environmental side is likely to be a number far larger than anyone has officially acknowledged to date. Since the amounts involved would most certainly have an enormous negative impact on the viability of the UEE and any proposed restructuring, we have recommended that those costs associated with the UEE's operations prior to such restructuring should remain a direct liability and obligation of the Government.

Decontamination and Decommissioning

The last key factor concerns the magnitude and handling of decontamination and decommissioning, or D&D costs as they are called. Based on the documents supplied by the DOE and Martin Marietta, and interviews with members of both entities, Smith Barney and its Project Team determined that the D&D cost estimates presented, to date, cannot be relied upon with any degree of certainty.

We recommend that a complete D&D cost study be commenced. The costs associated with D&D activities will have a profound effect upon the economic viability of the UEE and any restructuring would be impacted by the projected costs. Smith Barney

and its Project Team believe, however, that those D&D costs associated with the UEE's operations prior to any restructuring should remain a direct liability and obligation of the Government.

* * *

H.R. 2480

We believe that H.R. 2480 is a generally appropriate vehicle to provide the necessary flexibility so the UEE can conduct its operations in a business-like manner. However, we find two fundamental areas of concern which may constrain the success of the UEE under H.R. 2480. First, the proposed borrowing capacity of $2.5 billion may not be sufficient to finance the UEE's ongoing and regular capital needs together with the costs of AVLIS development and implementation. Furthermore, the express disallowance of United States guarantees on the indebtedness of the Corporation may be unrealistic for what in many ways, amounts to a start-up entity. In our Report we suggest the development of a thorough capital market access strategy which, as a failsafe, has as a part of the strategy, the ability to access the Treasury. This access could be in the form of either a right to borrow or as a right to receive a guarantee up to a certain limit.

Second, regarding the D&D Funding provision, we believe that, as a first step in dealing with D&D costs, there should be a thorough study, by independent experts, of the appropriate methodologies, costs and respective responsibilities for D&D. Thus, it is premature to legislate an amount of revenue to be put into a fund and, also, premature to allocate liability between Government and commercial customers. At the very least, there should be a provision in the bill that permits the Board of the Corporation to adjust the funding level for D&D, after the study is completed.

* * *

From an analysis, it is clear that the UEE has substantial pre-existing liabilities relating to environmental cleanup and ongoing compliance and decommissioning and decontamination. Furthermore, there are additional pre-existing liabilities arising from the Tennessee Valley Authority contract settlement costs. These obligations arise from prior enrichment operations and are "sunk costs" that will exist whether the UEE is shut down, restructured within the DOE, or transferred to a new profit-oriented entity outside of the Government. Estimates for these various costs range in the billions of dollars and, in many cases, are not currently subject to quantification.

Efforts to directly recover all or a significant portion of these "sunk costs" from the UEE's revenues, together with a proposed payback of "unrecovered government costs", are misdirected and ill-conceived in the context of historical objectives and future business requirements. A requirement to recover these costs would merely serve to create a debt burden and contingent liabilities that will make ongoing enrichment operations infeasible, whether under their current structure or restructured either within or outside the Government. These pre-existing "sunk costs" should remain with the Government.

Furthermore, and to the UEE's credit, in an increasingly competitive world market, where product price has become the dominant criterion for nuclear utilities purchasing enriched uranium, the UEE has maintained operating profitability. However, this current and near-term profitability is based on long-term contract prices that cannot be sustained when lower priced, short-term purchases begin to dominate the market.

Finally, it is important to note that the implementation of these restructuring recommendations will not necessarily result in a near-term magic transformation of the UEE into a dynamic business enterprise. But rather, it is the best way, in my opinion, to provide for the necessary operating efficiencies and financial flexibility to compete in a highly competitive world market. It is the best way to maximize the value of this enterprise to the Treasury and to the taxpayers.

It will take some time to implement these changes and to realize the benefits of restructuring. However, if the United States is to be competitive in the mid-1990's, now is the time to effect these changes. Failure to act now will be a clear signal to both competitors and customers that the United States does not intend to be a long term player in this business. Customers will decide that they can no longer rely on the UEE to meet their requirements, and they will continue to cancel their contracts. The U.S. will lose market share rapidly as competitors jump in to serve the UEE's former customers.

This may be a grim picture, but the worst part is that the U.S. taxpayer will be the real loser. With diminished revenues, if any, and with little opportunity to finally sell this enterprise to the private sector, the taxpayer will still have to foot the bill for the environmental and D&D sunk costs. Also, there will be no commercial revenues to help defray the cost of our military enrichment services.

Consequently we believe that the taxpayer will be better served if the UEE is transferred to a new government corporation.

Thank you, Mr. Chairman.

The CHAIRMAN. I thank the distinguished gentleman for his testimony.

I think that there is one very powerful point that sticks out in my mind that you made—the environmental cost. It seems to me that going back into public works when we pass the superfund bill—one of the reasons for passing the superfund bill is that we had to find some source of revenues to clean up the poisons, if you like, that were affecting the environment, and so forth and so on. And it was really not possible to quantify that legislation. We knew it was really bad, but we didn't know how bad it really was, obviously not having inspected every single site in the nation. And the taxpayer wound up, in effect, paying billions of dollars. There will be many, many billions of dollars to pay up those particular industrial wastes, etc., etc., etc., contaminating the water supply and the environment.

It seems to me the point you're making, which is a powerful point, is that there is a hole in the dike, that we really don't know exactly at this juncture—and I don't mean this critically—we just don't know. We haven't done an in- depth analysis or an investigation, if you like, of the environmental cost. That's the point you made as far as cleanup is concerned and as far as what we would be doing in making these areas, in effect, safe. Is that fair commentary?

Mr. TIMBERS. That's correct, Mr. Chairman.

The CHAIRMAN. Have you any idea on some kind of scale what that would be?

Mr. TIMBERS. In terms of the scope of the work that we looked at in the environment, it became a very dark cavern that we were going into. At this point we don't have the scope on the environmental side as to what those costs might be.

On the D&D side we have some sort of broad parameters based upon a number of other studies that have been done, but at this time on the environmental side we don't even have that concept of parameters as to what the cost would be on an ongoing basis and on a compliance basis to existing law.

The CHAIRMAN. I'll tell you what raises that question in my mind. Give me—you say you have an idea, at least a little bit of parameter, as far as D&D costs. What do you see there?

Mr. TIMBERS. We have seen that—we have estimated in our report here that the D&D costs have ranged in some of the estimations for a total of approximately $1.6 billion to in excess of $20 billion. Those are various ranges that have come up with. In our analysis, we came to a point in seeing that the ranges existed so broad and so great, that the first thing this new government corporation should do or that the Department of Energy should do is to embark upon a study to determine what those costs are, how the D&D needs to be done, how you allocate that between military and commercial use, and then, on the commercial use, how you allocate that between past users and ongoing D&D requirements.

Remember that these plants were build initially for military purposes. There is a school of thought that believes that once you turn these plants on in the 50s they're dirty — the costs have been incurred. Other people feel that the allocation of D&D costs should

be spread over the useful life and paid according to the use by various military and commercial purposes.

The CHAIRMAN. Well, I think basically logic would tell one that if they are somewhere in the range of cost of $1.6 billion to $20 billion, at least as far as we can identify it, that if you operate the plant for another 10 or 15 years or 20 years, whatever the case may be, you're going to have to have certain amounts of capacity there that we are going to continue to exacerbate the environmental problem—is that a reasonable point to make?—unless we start dealing with it now.

For example, I understand both of those plants are fueled by coal; isn't that correct?

Mr. TIMBERS. Yes, they are.

The CHAIRMAN. Yes. So, therefore, has anybody made an analysis, which I think is a valid point, as to what does the Clean Air Act mean? What is the context of the Clean Air Act going to be to the cost factors involved in continuing to operate these plants from an environmental point of view? I think it is a reasonable question.

Mr. TIMBERS. Mr. Chairman, we looked at it briefly. Today the average cost of production is approximately $70 per SWU, as for the power cost. And if you add on the Clean Air Act implications for the Senate, that adds $20 to that $70 to $90. If you add on the impact for the House, that adds $4 additional because these plants are specifically targeted. So you see the average cost of production going from $70 to $94 as a result of the Clean Air Act implementations if the House side is accepted.

The CHAIRMAN. Which is going to raise the cost— therefore has to raise the cost of the product that you are producing, right?

Mr. TIMBERS. Congressman, you've hit the key point here, and tha is that one of the reasons for this entity to be competitive in the future is to have competitive costs. The costs are—DOE has done a good job in remaining competitive today. It is a market that is going away from the long-term, fixed contracts to the spot market where the cost producing the unit is going to be all that important. You add clean air onto the existing cost today, and you see that it is going to have a very significant impact—up to $94 per SWU.

Now, we feel that on a long-term basis that the average cost of a SWU in the world market will come down to around $100 per SWU. That gives the United States a margin of about $6 per SWU. That's not a very big margin in there.

Now, I don't mean to wrap up the whole issue into this question that you're raising, but it is a very good one because why do you go into AVLIS? Now, I've heard a great deal of discussion over a period of time that AVLIS has a lot of risk to the taxpayers. Why invest into AVLIS?

Well, I think that's a very good question to ask but, at the same time, in any business enterprise when you go into a business enterprise they're going to have risks on one side. But, Mr. Chairman, you've got to be sure you ask the other question, too: what are the rewards to it?

We in the private enterprise do a risk/reward analysis, and I think to a large extent the risks of AVLIS have been identified, but the key reward to be recognized from AVLIS is reduction of the av-

erage cost of reducing a SWU by 35 percent, which makes the United States an extremely cost-attractive producer of the enriched uranium.

Now, if you reduce the cost of producing this product by 35 percent, then you have a tremendous opportunity to be highly competitive, to maximize profits, to increase market share.

So that when you look at the risks—and the risks of any business enterprise have to be evaluated—be sure that we collectively look at the rewards, as well. And the rewards are an opportunity for, in our judgment, the UEE to be a highly competitive and successful enterprise in the future.

The CHAIRMAN. Let me be the devil's advocate. In 1990, whether people understand it or not, there has been an economic revolution in the world that has taken place. I think the whole world is changing. We are in global marketplaces all over the place. If you're not in a global marketplace, you're not going to survive in most instances. Fair play?

Mr. TIMBERS. Yes.

The CHAIRMAN. I think that's number one. You've got 1992 Europe, you've got the Asiatic situation, you've got the United States, blah, blah, blah, and the whole bit.

Question: if we can do better, if we can get—the debate that was argued yesterday, which had to do with textiles and American jobs and then open free trade being economically more sound for the Nation—that was fundamental to the argument.

Now here we have a situation if people can produce goods more effectively or less expensive should not the consumer benefit? That's what was part of the argument in the textile issue. Or should we hang onto the marketplace and artificial supports or blah, blah, blah, whatever the case may be, and therefore keep part of the industry in this country? Well, we can survive.

I don't know whether we can or not. That's an interesting point, by the way. We can survive without clothes, but I'm not sure about energy.

But let's take this. I catch up. It's okay. Let's take this issue here. Therefore, if that is a fact—and that's happening in many markets. This is just one of—or many commodities if you like many markets.

So why should we get all hung up about this thing? Of course, we'll have an enormous environmental bill we're going to have to pay some—American taxpayers are going to pay that one way or the other. That's going to happen eventually. And maybe we won't decommission both plants; we'll just decommission one and keep the other one giving to give us a little security for the point of view of having enriched uranium vis a vis the point of our military needs and so forth. Why don't we just buy it on the open market? The open market is going to be cheaper? We would do that with steel. We would do that with other commodities and products. Why shouldn't we do it that way?

Mr. TIMBERS. Mr. Chairman, I would disagree with the one aspect that you mentioned, and that is that on the environmental cost we're going to pay for this—the taxpayer is going to pay for this whatever we do.

The CHAIRMAN. If the gentlemen would yield, where I'm coming from—you like to sift through the garbage, as the French would say.

Mr. TIMBERS. Right.

The CHAIRMAN. And you get to the point if the added costs for the D&D costs and the environmental costs are going to be added to the utilities, it is going to go to the ratepayer. Who is the ratepayer? That's us. I consider them to be part of the taxpayers, too, but other people don't consider that to be so. They are the users; therefore, user charge, and so forth. Nobody separated out the enormous input that it meant in a time and space as far as the military was concerned. That's what it was done for initially, if I'm making any sense to you. But that's all passe. That's figures and blah, blah, blah, blah. Those were national commitments. Those were decisions that were made by policies at the time of the Nation. Do you know what I'm trying to say?

Mr. TIMBERS. Yes.

The CHAIRMAN. Having said all of that, go ahead.

Mr. TIMBERS. This enterprise can make revenues, can produce revenues and generate profits and benefit the taxpayer in two ways, and this is—and, Mr. Chairman, I think this is getting right through the garbage. This is what we're talking about here. So we've got some costs to pay.

Now, we can charge the taxpayers directly on a tax or we can have an entity that is surviving well, is generating profits, and can make returns to the treasury through dividends or through other mechanisms of warrants on capital stock paid back to the United States Treasury—returns that are coming out of this enterprise on a dividend basis to pay for those costs, or in any other manner that Congress wants to determine to allocate that money.

The second way—which is a very important way—is that the thought here really is, after a number of years, that this entity may actually be able to be sold to the private enterprise. Somebody would come in and buy the assets and all aspects of this corporation and have the proceeds be available to the U.S. Treasury and the taxpayer. If a restructuring doesn't occur, the liabilities still exist out there, but the taxpayer does not have the source of revenues—will have a diminished source of revenues and will forego completely the opportunity to sell this entity to the private sector.

Now, those strike me as two compelling reasons why actually to do something. There are all sorts of other issues surrounding the reasons that this will make sense because the corporation will be able to compete more effectively in the marketplace, they will be able to take advantage of the spot market, be able to sell their product at a competitive basis, be able to bid for products—which they can't do now. They can discriminate between customers—that is, the needs of one utility over here is different than the needs of the utility over here.

Now, why do this? Today it is not going to make much of a difference in 1990. But the key issue, Mr. Chairman, is that when these contracts begin to expire on which DOE has been relying on at this time, 70 percent of the market will be in the United States, and that's DOE's market. In 1995, 70 percent of the uncommitted worldwide demand will be here in the United States, so that we

will be opening up this technology and this market to foreign competitors to come in and take advantage of.

The CHAIRMAN. Sure.

Mr. TIMBERS. Now, if that's something—if that's a public policy directive that Congress wants to do, that's one issue.

The CHAIRMAN. That's a different point, if the gentleman would yield.

Mr. TIMBERS. That's—

The CHAIRMAN. Now you're talking about public policy.

Mr. TIMBERS. That's—I will leave that in your domain.

The CHAIRMAN. No, no, no, no, no. You're missing the humor of that point. Well, let me continue my devil's advocate approach. I understand that the technology—if we are to do the research work we should be doing, then we have to conclude it will probably—and we were to be successful - - that's a question—that it probably would be the year 2000 before we could have a facility built—everything went right — the facility to be built—the AVLIS facility to be able to be built and produce this particular material.

Now, the contracts, as Henson Moore pointed out, are running out in 1995 and 1996. What are they going to do between 1995 and the year 2000, assuming everything went well? Would they go back and continue an agreement with the present situation, or do we go overseas?

Mr. TIMBERS. Basically I think that there will be clearly a—

The CHAIRMAN. Or both?

Mr. TIMBERS.—clearly a signal given as a result of the actions of the Congress here to the extent what various consumers view of the enriched uranium will do. To the extent they determine the United States will be a reliable supplier of that, they still will probably maintain a certain amount of their supply coming from the United States. They will certainly also enter into the spot market to the extent the spot market can supply it.

Now, it has been mentioned that the Russians are supplying SWU at about $50 per SWU today. That's not going to last forever, and the Russians can't supply the entire world market.

As you know from economics, as you cut out lowest cost or you fill up the lowest cost bucket you move to another higher- cost bucket. That's why we feel that the short-term market will not last forever. The short-term market is based upon some—current situations will not last into the next ten years, but the price will stabilize at approximately $100 per SWU. That is the point at which we will compete for that marketplace.

The CHAIRMAN. Mrs. Lloyd?

Mrs. LLOYD. Thank you very much, Mr. Chairman.

Mr. Timbers, I want to really explain what really— we're not going to have just "Eureka, everything is going to be magic," when we have the restructuring if this does become reality to a government corporation. We're looking hopefully at curing the ills of this enterprise.

Will you explain to the committee what business practices will be changed to make this difference? We realize it will not be business as usual in the restructuring process. What will they be permitted to do or prohibited from doing under the restructuring that will make it competitive?

Mr. TIMBERS. Restructuring, as has been mentioned, will remove section 161(v) of the Atomic Energy Act. In that regard, this new corporation will be able to price their product on a differential basis from one customer to another. It will be able to strike a deal with one customer that will be attractive on the West Coast, but they will be able to strike another deal that will be more economically advantageous on the East Coast the same time that they will be able to act quickly and respond to the moving exigencies of the marketplace. That's a way of saying they'll be able to bid. The marketplace is going to be moving to a bidding kind of market where a notice will be sent out and please submit your bids in three days as to what the best price is.

The ability for the uranium enrichment enterprise now to do that is very difficult. They'll be able to price more flexible, in other words.

We have suggested that the organizational structure be streamlined considerably and that there be a greater focus and concentration of management decisions.

The important thing—I think the key thing that has not been brought out very clearly is that the new government corporation will be able to take this enterprise outside of the ambit of the politics of Washington.

As we have indicated in our report, there are many lessons to be learned about the history of the UEE, and one of them is that by conducting a business enterprise within the ambit of an overview by Congress and Administration there are conflicting and changing demands that Congress puts on this enterprise.

The Carter Administration had a different goal than the Reagan Administration had. To the extent that you have a business enterprise, you have a consistent set of business practices that you put into place that are not changed by the vicissitudes of politics. That's how the enterprise ran into problems with the over-capacity. That's how they ran into the problems with GCEP. Getting out of that political environment will help the business-like operations of this enterprise significantly.

Mrs. LLOYD. Mr. Timbers, one thing that really concerns me, as you stated in your testimony, this legislation has— and I stated it, as well—has been before the Congress for some time now. It is the opinion of this member we should have moved a few years back to make this a reality.

My concern stems from trips that I have made— especially the Pacific Rim countries where some of our best customers are, and seeing their concern over our reliability as a supplier.

How long do you think we can go without passing legislation before we do really lose all of our reliability as a supplier of enriched uranium? This is what really troubles me.

Mr. TIMBERS. Mrs. Lloyd, I have to say that there is a lot of focus on—notwithstanding the tension here, but there is a lot of tension worldwide as to what is going to happen. There has been a lot of focus and attention on a report that we put out. To the extent that there are signals given by this Congress, they will probably be given now in terms of the commitment to move forward on other technologies, commitment for other private enterprises to enter into the business. They will begin to develop—consumers will begin

to develop strategies as to how to meet their uranium enrichment requirements without the United States.

Now, clearly there are contracts in place, but these contracts are beginning to be—DOE is receiving notification of cancellation of these contracts. Clearly, the spot market is going to have the dominant force in approximately four to five years. That's when the other competing entities will have geared up and be able to compete for this market demand that will be generated out of the United States.

Is the enterprise going to fall off the edge of the world next week? No, it's not. But to the extent that there is an opportunity to be able to position itself to meet that environment in 1994 and 1996, this is the time to act, because for this entity to be able to restructure itself and put itself on sound business footings cannot be done overnight.

Mrs. LLOYD. So our spot market plus present excess capacity has given us this window of opportunity to move forward; is that correct?

Mr. TIMBERS. And the window of opportunity will close in the mid part of this decade.

Mrs. LLOYD. So now is a crucial time for us to act?

Mr. TIMBERS. I think that the—

Mrs. LLOYD. If we are going to act.

Mr. TIMBERS.—the horse is going to be out of the barn by the mid-1990s, so if one is to act, this is the time to do it.

Mrs. LLOYD. Thank you very much.

Thank you, Mr. Chairman.

Mr. BROWDER. [Assuming Chair.] I thank the lady from Tennessee.

I believe the gentleman from Pennsylvania has some questions. Mr. Walker?

Mr. WALKER. Thank you, Mr. Chairman.

You've done a lot of talking about the marketplace here. I'm a little confused by what we mean by marketplaces here, I guess. It seems to me that if, in fact, the marketplace is as you describe it in the future, that there ought to be a bunch of private investors out there who will see these wonderful opportunities ahead and be willing to come up with the bucks to do that. Why isn't that the case? Aren't those the people that you would generally be talking to at Smith Barney about doing these kinds of things?

Mr. TIMBERS. There is a group in Louisiana that is— they are a consortium of private utilities together with one of the consortiums in Europe that is thinking about building a facility for 1.5 million SWU production. That is a limited amount.

Mr. WALKER. But in a world of overcapacity, the investors may be making a decision that that limited amount is, in fact, what can be sustained, aren't they?

Mr. TIMBERS. Well—

Mr. WALKER. And be profitable?

Mr. TIMBERS. Basically, Mr. Walker, the marketplace can absorb the United States walking away from this enterprise. There is overcapacity today. If the United States walks away from this enterprise, shuts down, closes down, the market will be able to absorb it through the spot market, existing inventories, and a significant

movement quickly by other entities to meet that demand. It does exist.

But I think one of the key issues here—and this is getting back to the chairman's original point—in cutting through a lot of this is the issues as to what is going to— the commitments that this enterprise has to meet in terms of past costs are going to exist whether you restructure this thing or not.

Mr. WALKER. But I mean—my point is that you are talking marketplace here. I mean, the marketplace is different, then, from that definition. The marketplace is the capacity that exists in the world. We are in a world economy.

Mr. TIMBERS. Right.

Mr. WALKER. That's the capacity that exists and the world. And the question becomes: what is going to be available to our nuclear industry in the future? It seems to me that what we now see is that you have much capacity throughout the world, and that whatever holes there are—if, in fact, there are major new opportunities in the mid-1990s or the year 2000—that there should be some private investors who would be very willing to take advantage of whatever opportunities exist.

From my standpoint, I'm having a little trouble understanding why the government should step into that marketplace and maybe assume major liabilities that don't have any proven ability to deliver by even the next century. I mean, do you see where I'm coming from? In a true marketplace you wouldn't have the government stepping in and figuring out a way to sell product within a marketplace that already has overcapacity.

Now, you know, I understand that the desirability here is perhaps that the United States wants to protect its share of the market.

The CHAIRMAN. Will the gentleman yield?

Mr. WALKER. Sure.

The CHAIRMAN. You have been making specific points which I think have been extremely valid because you are concentrating on the facts of what we are talking about.

Mr. TIMBERS. Yes.

The CHAIRMAN. The environment being one.

I think what the gentleman is saying, which is also in my mind: there is another assumption in the whole series of issues involved. It is not only today. We have really researched this ourselves.

The question would come up that there is an assumption that the AVLIS process is going to be a superior process in the world and, two, as I understand it—correct me if I am wrong—that the energy input into the AVLIS will be considerably lesser than the energy input in present technologies that are being used.

Mr. TIMBERS. That's correct.

The CHAIRMAN. And, therefore, if that assumption is correct, that's what should give us the edge. But we are making an assumption. The assumption is: one, the AVLIS process is not totally researched and completed; two, will it work? That gets to the point of the private enterprise issue. Will it work? Will it be satisfactory?

So isn't really not only the environmental issues and the SWU cost and so forth—isn't it based upon the new technology that would be considerably lesser in energy input to be able to compete

in the marketplace, therefore would be a superior methodology and be less expensive for people to use that process rather than any of the other processes in the world? Is that a correct assumption?

Mr. TIMBERS. Mr. Chairman, our analysis—we can't guarantee that this AVLIS is going to work. Our analysis, based on pulling together an independent panel of experts who know this technology quite well, to analyze where the research stands and the ability to put this on to a firm commercial basis is sound. It's good.

The belief there is that this thing is going to work. I can't give you any assurances to that respect, but our judgment in that regard is that it is a good technology. It is going to reduce the cost of production by 35 percent.

Now, is it going to be cost advantageous? It was mentioned before as to whether—why should we spend $2 billion to build AVLIS if, in today's dollars, it only provides $170 of benefit? Well, that's taking apples and oranges.

In our analysis, what we looked at was how effective is AVLIS going to be in terms of generating additional cash or additional benefit to the taxpayer? Our analysis looked at — it's not going to come into play until the year 2002.

Now, we only had to 2005 as a period of analysis. Now, if you only look at four years' analysis, you have $170 million.

The CHAIRMAN. But I don't think you're hearing—if the gentleman would yield—I don't think you're hearing me - - if the gentleman would yield further?

Mr. WALKER. Sure.

The CHAIRMAN. One of the—the heart of what the competitive advantage would be to the United States in this global marketplace in capacity is based upon whether our product is saleable not only in the United States from an economic point of view, but in a global marketplace. Isn't that a fair statement to make?

Mr. TIMBERS. It is.

The CHAIRMAN. All right. Now, if that's a fair statement to make, that's based upon the presumption or the assumption that we are satisfied with the technology, because I'm leading to the point he's making about should private enterprise get into it. In other words, that's an assumption that's out there. I'm not faulting your research. Your work was to do a certain thing, and that's what you did. And I think one of the assumptions they gave to you, based on the technology involved, yes, this does look better. Yes, we think it will work. From all the experts we know it will work. And, equally as important, it is going to take less input of energy and therefore it will be competitive in the next 10 or 15 years. That's basically what it is based upon.

Be the devil's advocate. Reverse it.

Mr. TIMBERS. Yes.

The CHAIRMAN. That's what the fellow was representing the taxpayer. Suppose it doesn't work? Then where are we at?

Mr. TIMBERS. Mr. Walker, would private enterprise want to jump into this now? No, they wouldn't, because it is not a very attractive marketplace in terms of a low-cost spot market developing here.

This is a market that we created by allowing the competition to come into it.

Mr. WALKER. But then don't tell me that the advantages of the government getting into it is because it is a marketplace decision. I mean, if that's the case, then the market has already made some of those decisions. The fact is, if you have a better mousetrap, the old theory was that the world beat a path to your door. If that's what you're saying, then there ought to be some people out there making strictly economic decisions who will make those decisions.

But the fact is some people in the world are looking at the fact that as the West Germans move into East Germany they're going to find a lot of nuclear plants there that they are going to have to shut down because they are unsafe. It is going to increase the overcapacity of product in the world even more. And investors taking a look at those decisions are not willing to make this choice, but what we're being asked to do is put up $2.5 billion of taxpayer-guaranteed money in order to do something that the marketplace has rejected. In all honesty, that gives me a little bit of pause.

Mr. TIMBERS. Mr. Walker, clearly in this environment here—the $2.5 billion is an estimate as to what the capital cost of AVLIS is going to be. Now one of our perspectives on this is that this money is not going to be necessarily borrowed directly from treasury but will be on the credit quality of this corporation. Our perspective here is that this corporation is not necessarily going to be as a government corporation forever, whether it is a sunset law or whether it is transferring into the private sector. It was the hope, plan, the expectation that at some time that if this corporation would get its act together that it would be constructed in a profit-making manner sufficient that would attract buyers from the private sector.

Now, is the private sector going to jump into this marketplace here today? No, I don't think so.

Mr. WALKER. But I thought you were indicating that there were some investors in Louisiana who were looking at jumping in.

Mr. TIMBERS. At a very small, nominal amount.

Mr. WALKER. Yes, but maybe that's what the market can sustain. In other words, they are making fundamental decisions. If the market could sustain bigger amounts, the fact is that you would have investors jumping in for bigger amounts. Somehow the marketplace usually works reasonably rationally.

Mr. TIMBERS. You know, our perspective on this has never been and it is not today that this legislation here will transform this entity some magical way into a profit-making, glorious, brand-new Apple Computer Company. It's not going to.

But the issue here—and I think as I tried to stress—

Mr. WALKER. Let me follow up on that. So what you're saying is that the taxpayers are going to form a corporation outside the political and bureaucratic environment that is being designed to lose money.

Mr. TIMBERS. Absolutely not. Absolutely not.

Mr. WALKER. That's what I thought I heard you say.

Mr. TIMBERS. In terms of creating a government corporation, our perspective has been that it is not going to be a magical transformation of where the problems exist today, but it is the best way to maximize the profits out of this corporation, the best way to maximize the revenues being generated out of this corporation, best way

to maximize the value of the corporation that can ultimately be sold to a private enterprise, and in those ways you maximize the value to the taxpayer, and in those ways you generate sufficient or as optimal amount of revenues as possible to meet those liabilities that you have incurred.

Mr. WALKER. If everything happens and it all works and we put this thing together and we get her built by the year 2000 and it's all running up, when can we expect to see it being profitable?

Mr. TIMBERS. It's profitable today. Absolutely. It has been profitable on a GATT basis three of the last five years. It has been generating positive cash flow for the last five years.

Mr. WALKER. Even with all the—I'm talking about after we have invested $2.5 billion and all of this and you have interest payments on the $2.5 billion and all that. Is it still profitable in the year 2000 at that point?

Mr. TIMBERS. We can't—we did not get into the estimation of what it is going to be at that time.

Mr. WALKER. Thank you, Mr. Chairman.

The CHAIRMAN. I thank the distinguished gentleman.

I think what we're all trying to get at is that this committee is a gutsy committee where there is technology and we can put it together and make something work. On the other hand, it seems to me that when we talk about the present situation—and if I were going to run this as a private entrepreneur I wouldn't step into it now not only because of the marketplace, the international capacity and so forth; I would look at it as to what the future of it is. It seems to me that if I was to look at it what the future is that I wouldn't use the centrifuge method and whatever. I'd be looking for what the most advanced technology. And therefore, because I can be able to compete in the marketplace ten years down the line or eight years down, once I get it built, and so forth, I'm going to then be a premier supplier, if you like, or processor, and I'm going to have the best price in the world. I think that, assuming marketplace other than the Soviet market system. Do you understand where I'm trying to come from?

Mr. TIMBERS. That's absolutely correct, and the—

The CHAIRMAN. Let me i.e. the following. Let me say the following. Then if I was a private entrepreneur I wouldn't enter it with a ten-foot pole right now. But, however, suppose the reverse of that were true and we were saying, "Okay. It may be that the revenue stream has to be enhanced or that has to be supported to be able to move this program forward." What happens in 1995 if all the folks that are in those contracts are running and saying, "Too bad. We're not going to hang around until you guys get that AVLIS built. You're not going to build it until 1998 or 1999 or the year 2000." How do I get those contracts back again? Do you understand my question?

Mr. TIMBERS. The UEE has to be in a position to be able to compete in that marketplace. It is not going to go back to a contractual market, at least as we foresee it. And, therefore, the cost economies of the UEE have to be put in place to be able to compete on an effective basis on the spot market.

And remember, the spot market is not always going to be at $50 per SWU. It is not always going to be at $70 per SWU. It is going to come up to a level—

The CHAIRMAN. We know that by the oil spot market. But go ahead.

Mr. TIMBERS. Pardon me?

The CHAIRMAN. We know that by the oil spot market.

Mr. TIMBERS. Yes. And it is going to rise to a point — in our estimation it is going to be approximately $100 per SWU. Now, our cost production today is pretty good. It allows UEE to be pretty profitable and productive. But when you are adding clean air on top of that, the margins are going to get very, very thin, and therefore that new technology, that AVLIS technology, is going to be key, in our judgment, as to whether this dog is going to hunt or not.

The CHAIRMAN. I understand.

We have to go vote. We have a second—we'd better go vote and return.

I think we have exhausted our discussions at the moment with you, Mr. Timbers. I think in view—you've got to forgive us today. If you can recognize, there are like 17 million things on that floor. When you're in this business and you're in the last week, I've got news for you—you'd better be available; otherwise, you lose your shirt.

Having said all of that—and you wouldn't want us to lose our SWUs or our shirts at this point—so suppose when we come back we'll combine Mr. Sommerfeld and Mr. Paquette and Mr. Glasgow on a panel here and then we can see what industry and what some of the other folks in the power industry think about this discussion. So as soon as we return we'll do just that.

[Recess.]

The CHAIRMAN. The committee will come to order.

It reminds me of the story of the Indians. And then there was one. But, however, as long as the Indian that remains is a chief, then in that instance our time will be well spent.

Where is Mr. Paquette? Is he here?

Went to get a sandwich? He's breaking all the rules.

[Laughter.]

The CHAIRMAN. Well, I tell you, we're going to begin because time is—you've been very generous with your time on this. I just want to say on behalf of myself and the committee we certainly do appreciate, first of all, your being here—and, equally as important, the patience you have had with us before you get a chance to make your presentation.

Suppose we start out first with Mr. Sommerfeld, representing Martin Marietta's Energy Systems, vice president of the corporation. I know you have a lot to bring to this debate because you are out there doing the work while everybody else is talking about it. So suppose we start first with Mr. Sommerfeld.

All the statements will appear in full in the record. I think we've had a chance, if you'll indulge me a moment—I think we've had a chance to have an overview of the statistical background, but we have some specific questions. What more can you help us with?

Mr. Sommerfeld?

STATEMENT OF KENNETH W. SOMMERFELD, VICE PRESIDENT, MARTIN MARIETTA ENERGY SYSTEMS, INC., OAK RIDGE, TENNESSEE

Mr. SOMMERFELD. All right. Thank you, Mr. Chairman.

Let me say that Martin Marietta strongly supports the creation of a wholly-owned government corporation because we believe it is an appropriate means to a viable enrichment program, and we take this position knowing full well that there is the possibility or the potential that we in Martin Marietta may lose our position as the enrichment contractor if this legislation is passed. We essentially think it is the right thing for the country to do.

I won't go into the statistics, but it is very, very discouraging to see the marketplace erode the way it has in the last few years with a 32 percent change in the Department of Energy share.

We have testified in the past in this area. The real question to us is that if our objective is to retain a domestic source for enrichment services, the relevant question becomes: what structure is appropriate for the long-term survival of the nation's enrichment program.

The question has been thoroughly studied. The unanimous conclusion reached by the Congressionally-chartered National Academy for Public Administration, by the Department of Energy, by the 84 Congressional Tri-Committee Business Panel, by Smith Barney, the United States Senate, by the Edison Electric Institute, the United States Energy Council, and by the National Association of Regulatory Utility Commissioners is that it should be reconstituted as a government corporation, and I have not seen any dissent from that conclusion.

With such unanimity on the solution, it is surprising that action hasn't been taken, and I think that certain secondary questions have tended to dominate the discussion. I think it is important that you understand them, but it is important also that they not be allowed to prevent action.

One secondary issue is this so-called "unrecovered cost." This issue basically is the result of a debate over proper accounting treatment of historic and past costs. But the reason question is who will benefit if a treasury obligation is set at $9 billion and the resulting SWU price is so high that there are no remaining customers.

How is it in the best interest of the taxpayers if the corporation is burdened with a large treasury obligation and is forced to withdraw from the market? If there are no customers, the taxpayer will not only receive no return on any prior investment, but will pay an even larger portion of the closeout cost.

It is our belief that the emphasis should be placed on creating a fair, solid basis for future success as opposed to attempting to resolve historical and past questions.

Another issue evolves around the eventual liability for decontamination and decommissioning. This debate is centered upon who is or will be responsible for these liabilities. No matter what the legal structure of the enrichment program, its owner is still the same—the United States. The Federal Government originally built the plants, operated them for national security purposes. Wisely

that over-capacity was subsequently dedicated to the peaceful uses of atomic energy.

Reconstituting the program as a government corporation does not alter either the history or the ownership of the asset. The primary difference that arises from the creation of a commercially-oriented government corporation is the potential to sustain a future revenue stream to offset a portion of future liabilities. Without restructuring, we believe the financial burden of the taxpayer will increase the cover cost associated with the operation of the program.

Mr. Chairman, we urge you to take the first step. Clearly decide that it is in the best interest of the Nation to retain a domestic supply of enrichment. And take the second step—establish a government corporation with a treasury obligation, if any, that will enable the corporation to compete.

We urge you not to allow this discussion to continue to dissolve into an accounting debate.

Without restructuring, the taxpayers we believe will be left with an untenable position. With restructuring they have the potential—not the absolute guarantee, the potential— to avoid some level of future risk and a portion of the past liabilities.

With restructuring, the taxpayers stand a chance at recouping past investments, and there is no logical reason for not electing this option.

The appropriateness and reasonableness of the legislation is clear: restructuring will send a very distinct signal to the customers, both domestic and foreign.

And so I am confident that with the proper commercial structure this enterprise will continue to be a valuable asset.

Mr. Chairman, we appreciate the opportunity to express ourselves. We are hopeful that our appearance before your committee has been beneficial. As always, Martin Marietta stands ready to help and assist you in any way we can.

[The prepared statement of Mr. Sommerfeld follows:]

WRITTEN TESTIMONY OF

KENNETH W. SOMMERFELD
VICE-PRESIDENT, ENRICHMENT
MARTIN MARIETTA ENERGY SYSTEMS, INCORPORATED

BEFORE THE

COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES

ON

RESTRUCTURING THE D.O.E. URANIUM ENRICHMENT ENTERPRISE

OCTOBER 11, 1990

Mr. Chairman and Members of the Committee:

First of all I would like to thank you for this opportunity to appear to discuss the Department of Energy's uranium enrichment program. I am the Vice-President of Enrichment for Energy Systems, which is the management and operating (M&O) contractor to the Department of Energy for the uranium enrichment program which includes the production facilities at Portsmouth, Ohio and Paducah, Kentucky and AVLIS development support activities in Oak Ridge, Tennessee and Livermore, California. As the M&O contractor, Energy Systems is in a unique position to address the current state of enrichment and the urgent need for restructuring legislation. While the enrichment program was once the sole provider of toll enrichment to both domestic and foreign utilities, today it is a vulnerable competitor struggling under the inflexibilities of an agency structure.

Martin Marietta strongly supports the creation of a wholly-owned government corporation, known in H.R. 2480 as the United States Enrichment Corporation, as an appropriate means to sustain as a viable supplier of domestic enrichment services in this country. We take this position knowing full well that there is the potential for Martin Marietta to lose its position as enrichment contractor if this legislation is successful. Our concern is that this business remain viable. We firmly believe that it is in the nation's best interest for the enterprise to remain viable for both commercial and national defense reasons over the long term. To remain viable over the long term, the enterprise must become more competitive. To do so, the enterprise must be given the commercial flexibilities to compete on an equal basis. H.R. 2480 offers many of these flexibilities.

One of the most discouraging developments we have witnessed has been the massive termination of DOE enrichment services contracts by the utility customers of the enterprise. Unless strong measures are taken to reverse the current trend, DOE will be left with less than one-fourth of the world market at the turn of the century (1999). During the past few years that this issue has been debated in Congress, the enterprise's post-1996 customer base has declined by more than 32 percent (32%). The DOE's committed market share has deteriorated from around fifty percent (50%) today to an estimated thirty-four percent (34%) in 1996. During the next five years, this downward trend could worsen. The implications of such a drastic reduction in market share are staggering considering the enterprise generates up to $1.4 billion a year in revenues, including approximately $500 million in foreign sales. The lost export sales plus increased imports due to the non-competitive status will negatively affect this country's balance of payments. Additionally, a large number of jobs, including a great many highly-technical positions, will be lost with the cessation of

enrichment services in this country. Furthermore, the United States will have relinquished control of a service that is required for 20% of this nation's electric energy supply. Can we subject yet another substantial part of our energy portfolio to dependance upon foreign supply? We believe the wisdom of such a policy is highly questionable, particularly in view of the current Middle East situation.

Energy Systems has previously provided testimony on several occasions in support of restructuring the DOE uranium enrichment enterprise. On these previous occasions, we discussed specific concerns of the enterprise as addressed in various legislative proposals, such as the institutional constraints, the "unrecovered costs", the lack of commercial flexibilities, and environmental and regulatory concerns. We, as well as others, have provided statements on the advantages and appropriateness of the corporate structure for a government enterprise. One of the advantages of the proposed corporate structure include increased fiscal and operating flexibilities, such as the ability to retain and use as needed revenues from operations, the ability to purchase power for efficiency purposes, the ability to tailor contracts to the needs of individual utilities. Another advantage is the reduction of political influence over business decisions. In testimony before a Senate subcommittee, Alan Dean, a Fellow at the National Academy of Public Administration, stated that it is appropriate for a public enterprise to be structured as a government corporation when the following criteria are met: 1) revenue producing, 2) potentially self-sustaining, and 3) involve a large number of business transactions with commercial entities. The enrichment enterprise meets all three criteria.

It is obvious that the present structure is unacceptable if the objective is to retain a domestic source of enrichment services. Therefore, the relevant question becomes: what structure is

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appropriate for the long-term survival of this nation's enrichment program? This question has been thoroughly studied. The unanimous conclusion reached by the congressionally chartered National Academy for Public Administration, by the Department of Energy, by a 1984 congressional Tri-committee Business Advisory Panel, by Smith Barney, by the United States Senate, by the Edison Electric Institute, by the American Nuclear Energy Council, by the National Association of Regulatory Utility Commissioners, and by Martin Marietta is that it should be restructured as a government corporation. I have not seen any dissent from that basic conclusion. With such unanimity on the solution, it is surprising that action has not yet been taken. The problem lies not with the primary issue, but with other digressive secondary issues.

One secondary issue is the so-called "unrecovered costs". This issue is the result of debate over the proper accounting treatment of past costs. Unrecovered costs are important because the corporation will have to price its SWUs to fund any required payments to the Treasury. The higher the dollar amount of this required payment, the higher the price of SWUs. Who will benefit if a Treasury obligation is set at $9 billion and the resulting SWU price is so high that there are no remaining customers? How is it in the best interest of taxpayers if the corporation is burdened with such a large Treasury obligation that it remains uncompetitive and is therefore forced to withdraw from the market? If there are no customers, the taxpayer will not only receive no return on prior investments but will have to pay the burden of closing this business including the full cost of decontamination and decommissioning, environmental restoration and other obligations to the U.S. Treasury.

Clearly, it is in the taxpayers' interest to establish Treasury obligation, if any, at a level which will allow the corporation the opportunity to succeed. Every dollar the corporation makes above its

operating cost is a dollar that the taxpayer will not have to pay. It appears obvious that the emphasis should be placed upon creating a solid basis for success as opposed to attempting to resolve an historical accounting issue.

What is the amount of the unrecovered costs of the enterprise up to the present? The answer to this question is totally dependent upon what assumptions one makes. Further debate of this issue is pointless. Rather, the real question is: what repayment will give the corporation a reasonable chance of survival and will maximize the value to the taxpayers? It is time to address this basic question. We believe it is time to end the theoretical debate about what past costs are chargeable to the proposed corporation and reach a consensus upon what future returns are earnable by the corporation.

Another secondary issue revolves around the eventual liability for the decontamination and decommissioning costs for existing facilities. This debate has centered upon who is or shall be responsible for these liabilities. No matter what the legal structure of the enrichment program, it's owner remains the same -- the United States. The facilities of the enrichment program are currently owned by the federal government, as they would be with the creation of the U.S. Enrichment Corporation. The federal government originally constructed and operated these facilities for national security purposes. Wisely, the overcapacity built for the military was dedicated to the peaceful use of atomic energy and the DOE uranium enrichment enterprise was subsequently created. Reconstituting the program as a government corporation does not rewrite this historical fact nor not alter the ownership of the assets. The primary difference that arises from the creation of a commercially-oriented government corporation is that it will have the potential to sustain a revenue stream to offset future liabilities. It is difficult to see any benefit to the American public of a policy

that intentionally closes the door on an option to reduce future taxpayer outlays. We believe this debate fails to address the primary issue and serves only to defocus the efforts of Congress.

Mr. Chairman, we urge you to take the first step: clearly decide, as a matter of policy, that it is in the best interest of the nation to retain a domestic source of supply for enrichment services. Then take the second step: establish a government corporation with an acceptable treasury obligation, if any, that will enable the corporation to compete. We urge you not to allow this discussion to dissolve into an accounting debate, nor should the discussion be over which government organization is to blame for past mistakes. Do not divert your efforts from freeing this enterprise, which has served this nation and the free world well for over twenty (20) years, and which cannot survive in its present structure.

The fact is that without restructuring, the taxpayers will be left in an untenable position; with restructuring, they have the potential to avoid some level of future risk and a portion of past liabilities. With restructuring, taxpayers have an opportunity to continue to recoup past investments through increased value of the assets, with or without privatization. Additionally, the opportunity to fully exploit the investment in AVLIS will become a reality. There is no logical reason for not electing this option. A course of no action to reconstitute this entity spells certain failure. The odds are that if this legislation is not passed during this Congress, the enrichment program will not survive past the turn of the century.

Despite its weaknesses as a competitor, the DOE uranium enrichment enterprise does retain future value. However, it is our belief that its strengths can only be realized in a management structure that has the charter and flexibility to compete in global markets. Although the enterprise

is rapidly losing market share, it remains the world's largest supplier. Through 1996, the enterprise retains several billion dollars in customer contracts. The gaseous diffusion facilities continue to improve production performance and the enterprise retains a substantial lead in new technology development. The employees represent a well trained and dedicated work force. These strengths as a producer can only be exploited to their full potential if the enterprise is empowered to be an equally strong competitor.

SUMMARY

In closing, let me again stress that under the present structure, all past liabilities and future risks are the responsibility of the U.S. Government, i.e., the taxpayers. If nothing is done, the taxpayers are assured of losing this strategic business, paying the full cost of D&D and environmental restoration and assuming the full risk of any future technology deployment. If Congress creates a government corporation, these costs and risks will remain. However, there is a significant probability of these costs and risks being equitably shared or assumed by the customers of enrichment services. The appropriateness and reasonableness of this legislation should be clear to those familiar with the issue. Restructuring will send a clear signal to the customers, both domestic and foreign, that this country is committed to a viable and competitive enrichment program. I would like to restate that I would encourage the members of the committee to seriously consider H.R. 2480 and take steps to create a managerial structure that has an opportunity to succeed in this dynamic market. I am confident, that with a commercial structure, this enterprise will continue to be a valuable asset to the United States.

Mr. Chairman, we appreciate this opportunity to express our views on this issue of national importance. We are hopeful that our appearance before this distinguished body has been beneficial in your efforts. As always, Martin Marietta stands ready to support the Congress and the Department of Energy in any manner deemed appropriate.

BIOGRAPHICAL SKETCH

KENNETH W. SOMMERFELD

Kenneth W. Sommerfeld is a native of Alpena, Michigan. He received a B.S. degree in Mechanical Engineering from Valparaiso (Indiana) University, and attended graduate school at the University of Tennessee. He is a graduate of the Cornell University Executive Development School and the UCLA/ARPA Defense Science Seminar. He was named an Eminent Engineer by Tau Beta Pi. He worked for the E.I. duPont Company in Niagara Falls, New York, before entering military service, where he served as a pilot in the U.S. Navy.

In 1958 he joined Union Carbide Corporation's Nuclear Division at the Y-12 Plant. In 1968 he transferred to the Oak Ridge Gaseous Diffusion Plant as the Operations Division Superintendent. In 1979 he assumed the duties of ORGDP Plant Manager, and in October 1981 he was assigned to the Oak Ridge National Laboratory as the Executive Director. In April 1984, when Martin Marietta Energy Systems replaced Union Carbide as the Operating Contractor, he was appointed to his present position as Vice President, Enrichment.

October 11, 1990

The CHAIRMAN. Thank you very much, Mr. Sommerfeld.
Mr. Glasgow?

STATEMENT OF JAMES A. GLASGOW, ATTORNEY AT LAW, DOUB, MUNTZING & GLASGOW, WASHINGTON, D.C.

Mr. GLASGOW. Mr. Chairman, I'm pleased to be here today at the invitation of the committee to share my views regarding certain aspects of this legislation that have received relatively little attention to date. I would intend to compress my remarks quite significantly and relate them to some issues that have arisen during today's hearing.

The question has been raised about why not maximize the price recovery of the corporation. This, however, has a distinct relationship with some things I'd like to talk about, and that is, to start off with, freedom of U.S. utilities to purchase their enrichment needs abroad under U.S. law. That is illustrated by that Wall Street Journal article that the committee members received earlier today.

It has been suggested by some that U.S. utilities could be forced to purchase domestically from the corporation or DOE. But to do that, Mr. Chairman, I suggest would require quite a different interpretation of existing laws or possibly than they have been given to date or enactment of new laws to that effect. Right now U.S. utilities purchase enriched uranium abroad just as companies purchase textiles abroad or steel abroad, and there is no effort by this government to prevent that from happening.

How could the Congress prevent such purchases abroad? Could it happen under existing law is perhaps a relevant question. The Atomic Energy Act gives the freedom, gives the authority to the NRC—the Nuclear Regulatory Commission— to license imports, and it does so mainly on the basis of a general license which is on the books today.

The basis for denying a license over at the NRC is if the Commission finds that the proposed import would be inimical to the common defense and security or constitute an unreasonable risk to the public health and safety.

So far, the Executive Branch has not made any suggestion to the NRC that it should revoke that existing general import license, nor do I understand that the Executive Branch presently has any such intention.

Moreover, I find it significant that in litigation before the Supreme Court on the Western Nuclear case involving a request by the domestic uranium industry to restrict DOE's enrichment of foreign uranium that DOE considered the question of whether U.S. utilities could be forced to purchase domestic uranium by the device of NRC lifting that general import license.

The DOE did not make such a request to the NRC and did not advocate that position before the Supreme Court.

Well, how about international agreements to this effect? We look, of course, at the general agreement on tariffs and trade. GATT does give some flexibility in article 21 with regard to fissionable materials. It says that nothing in GATT shall prohibit any party from "taking any action which it deems necessary for the protection of its essential national security interest."

However, it could be argued that the preservation of the economic health of the U.S. Enrichment Corporation that this legislation would establish would be essential to the U.S. national security, and therefore import restrictions to protect the corporation were permissible under article 21 of GATT.

In my view, that would stretch the concept of a time when there are substantial stockpiles of nuclear material. In any case, the GATT formula is tied to essential national security interest. So, Mr. Chairman, I submit that the present flexibility of U.S. utilities should be allowed to continue under existing law.

I'd like to turn to some legal aspects of the corporation's possible purchase of Soviet enriched uranium or Soviet enrichment services. Questions about DOE's possible purchase of this material were considered as long ago as July in a hearing of the subcommittee of this Committee on Energy, Research, and Development Subcommittee. The matter has been touched upon today. Deputy Secretary Moore mentioned the possibility that DOE or, indeed, the new corporation might serve as a marketing agent for the Soviets and derive a price advantage through such a technique—and, incidentally, would dry up through such a device the availability of Soviet material to come directly to U.S. utilities or through private companies where the marketplace operates freely.

There are some legal difficulties, in my opinion, to having this new corporation purchase enriched uranium or enrichment services from the Soviet Union. The bill, as presently structured, says in section 1401 that the corporation's ability is to acquire or distribute enriched uranium and transactions with persons in accordance with and within the period of an agreement for cooperation under section 123 of the Atomic Energy Act.

The point is the United States does not now have such an agreement for cooperation with the Soviet Union nor, according to the State Department, is such an agreement actively under discussion with the Soviets.

Now, it is true that the United States, through the NRC, is collaborating very extensively with the Soviet Union in the field of nuclear safety, but so far that basic atomic energy agreement under section 123 does not exist, and that is the framework for nuclear material and commodities to be exported from the United States.

So it appears that, under section 1401 of the bill that is the subject of this hearing, that the corporation would not be given that flexibility to purchase from the Soviet Union.

Obviously, it would be up to the committee to consider whether to make any modification to the bill in that respect, and I simply point it out as a matter of the interpretation I have given to it.

As for an agreement for cooperation, that would be the normal way to do business with the Soviet Union in this area.

I'd like to take a brief look at some of the anti-trust aspects of the bill. Section 1605 is entitled "Applicability of Anti-Trust Laws." It provides that the corporation shall conduct its activities in a manner consistent with the policies expressed in the anti-trust laws. That I submit, Mr. Chairman, is a very important provision of this legislation, and in that respect this legislation is consistent

with the anti-trust provisions in the COMSAT bill that set up COMSAT.

As has often been observed, the anti-trust laws express rather broad policies whose exact meaning has been the subject of hundreds of Federal court decisions.

Now, it is true that H.R. 2480 specifies that the corporation shall comply with the policies set forth in the anti-trust laws, that the laws, themselves, are broad and constitute policies. This is tantamount to a command, I submit, that the corporation obey the anti-trust laws.

Now, that is significant in my opinion because the type of marketing of enrichment services that Deputy Secretary Moore was talking about earlier seems to me to raise anti- trust implications. It is true that this bill does not create a cause of action against the corporation, but its conduct would be measured against the gridwork of anti-trust law, and its compliance with that could be expected to be the subject of Congressional oversight.

Under anti-trust law, a market entrant with a substantial percentage of the business creates anti-trust questions if it engages in a substantial purchase arrangement of this sort that is being apparently contemplated by DOE. If this kind of a venture is considered a joint venture to help the Soviets market their material in the United States, it should be held up against the scrutiny, in my view, of some applicable decisions of the Supreme Court and the Courts of Appeals, some of which I have cited in my brief.

I'd like to turn now to some aspects of the contract by which DOE delivers its enrichment services. This is the utility services enrichment contract. It has been in effect since 1984. It has been called DOE's most priceless asset and, of course, it would serve as the business foundation for the new corporation.

It has been called a tough contract that you can't break and that utilities are required to buy from DOE. That's one reason why perhaps some have considered raising the price— because the utilities would be bound to buy from DOE within the terms of those contracts.

Mr. Chairman, I suggest that that's an erroneous concept. This contract, in my view, is severely flawed. It is considerably—it is open to different interpretations when it comes to the two most key concepts: what are those enrichment service requirements? And when do they arise?

The Energy Department has taken a view in letters to customers that requirements are not offset or reduced when a customer goes out and buys enriched uranium product or fabricated fuel. However, there is, in my view, a reasonable argument that can be made that the DOE wrote this contract to cover enrichment services. If a customer goes out and buys fabricated fuel, that utility doesn't have a need for enrichment services at that point. Under normal rules of legal drafting and construction, ambiguities in a contract are to be held against DOE as the sole drafter of that contract. This is a rather lengthy matter about contract interpretation, but I would like to suggest that disputes have arisen about this. They are likely to continue. They would likely become more severe if DOE raised its price.

Customers in those instances may ask themselves why they should not consider the purchase of fabricated fuel or enriched uranium product from others in those particular circumstances.

Mr. Chairman, this legislation wisely calls upon the new corporation within five years to try to renegotiate its existing contracts. In view of the significant flaws in utility services enrichment contract, I think that would be an excellent course of action on DOE's part.

I hope that these remarks have been helpful to the committee in its consideration of this bill.

Thank you.

[The prepared statement of Mr. Glasgow follows:]

Testimony by
James A. Glasgow
Attorney at Law
Doub, Muntzing and Glasgow, Chartered

Before the
Committee on Science, Space, and Technology

U.S. House of Representatives
October 11, 1990

Mr. Chairman and members of the Committee, I am pleased to be invited to appear before the House Science, Space, and Technology Committee to discuss certain aspects of H.R. 2480 that have received relatively little attention to date. My comments are based, in part, on my experience in the fields of nuclear law and energy law gained in private practice and, during the 1970s, as an attorney with the Departments of Energy and Justice, the U.S. Atomic Energy Commission, and the U.S. Nuclear Regulatory Commission. Since 1981, I have been in private law practice with the Washington D.C. law firm of Doub, Muntzing and Glasgow, Chartered.

The aspects of H.R. 2480 that I wish to address are: (1) the freedom of U.S. utilities to purchase enrichment services from the U.S. Uranium Enrichment Corporation that would be established by H.R. 2480, or other domestic sources, or acquire enriched uranium abroad; (2) the U.S. Enrichment Corporation's possible purchase of enriched uranium from the Soviet Union; (3) the significance of the antitrust provisions set forth in section 1605 of H.R. 2480; (4) the Corporation's obligations under the enrichment contracts that it would inherit from DOE; and (5) the U.S. Enrichment Corporation's ability to pursue new customers in other countries and retain existing foreign customers.

U.S. UTILITIES' FREEDOM TO PROCURE ENRICHED URANIUM OR ENRICHMENT SERVICES IN THE UNITED STATES OR ABROAD.

Although DOE still supplies around 90 percent of the enrichment needs of the U.S. utilities, its domestic business could

shrink by 1995, as a result of enrichment customers' partial terminations of their contracts. A major task facing the U.S. Enrichment Corporation would be to retain a sizeable share of the U.S. enrichment market. In developing a marketing strategy, the Corporation must take into account the freedom of U.S. utilities, under domestic law, to seek to meet their fuel cycle needs from any source, whether foreign or domestic. It has been suggested that U.S. utilities could be required to purchase their uranium enrichment needs from DOE, or a government enrichment corporation. The National Taxpayer's Union has argued that this could be done through the Nuclear Regulatory Commission's revocation of its existing general license authorizing imports of natural and enriched uranium from all countries except South Africa. However, DOE officials have indicated that DOE has not made such a suggestion to NRC or even given serious consideration to such a proposal.

Under present law, the NRC may deny an import license only "if it finds that the proposed import would not be inimical to the common defense and security or constitute an unreasonable risk to the public health and safety...." [10 CFR section 110.44(b)]. Although the NRC has often deferred to the views of the Executive Branch as to conditions that would be "inimical to the common defense and security," a question arises as to whether NRC could properly deny import licenses for foreign enriched uranium in response to an Executive Branch request for such action to protect the U.S. Enrichment Corporation. In my view, imports of nuclear

material could not properly be curtailed for this reason, in view of the Atomic Energy Act's limited basis for the NRC's denial of import licenses.

Furthermore, the creation of legal barriers to the import of enriched uranium would invite retaliatory trade measures by U.S. trading partners. Any U.S. restriction on the import of foreign enriched uranium must be assessed in light of Article XXI of the General Agreement on Tariffs and Trade (GATT), which provides, with respect to fissionable materials, that nothing in GATT shall prohibit any party from "taking any action which it deems necessary for the protection of its essential national security interests." An argument could be made that preservation of the economic health of the U.S. Enrichment Corporation was essential to the U.S. national security, and import restrictions to protect the Corporation were thus proper under Article XXI of GATT. However, in my view, the economic interests of the Corporation are not readily linked to "essential" U.S. national security interests.

If a commercial enrichment facility becomes operational in Canada, it will also be necessary to consider an import restriction in light of the U.S.-Canada Free Trade Agreement (FTA). Although Canada does not presently have a uranium enrichment industry, such a capability may emerge, in view of the molecular isotopic separation venture recently announced by Isotope Technologies Inc., and Cameco, a Canadian uranium mining company. Under Chapter Nine of the FTA, the ability of the United States to exclude Canadian goods, including enriched uranium, is highly circumscribed.

LEGAL ASPECTS OF THE U.S. ENRICHMENT CORPORATION'S POSSIBLE PURCHASE OF SOVIET SWU.

Questions about DOE's possible purchase of Soviet enrichment services were raised during the July 11, 1990, hearing of the House Science, Space, and Technology Subcommittee on Energy Research and Development. Although a possible DOE-Soviet arrangement is reportedly undergoing inter-agency review, DOE has not yet announced whether such a transaction will be consummated. A Soviet separative work unit (SWU) purchase arrangement may well be considered by the U.S. Enrichment Corporation as a way of lowering its SWU prices over the near term, as was reportedly suggested in the study performed for DOE by the Smith-Barney firm.

It is not clear whether H.R. 2480 would allow the Corporation to carry out a SWU purchase arrangement with the Soviet Union. Among the "specific corporate powers and duties" set forth in section 1401 of H.R. 2480 is the Corporation's ability to "acquire or distribute enriched uranium . . . in transactions with . . . (3) persons in accordance with, and within the period of, an agreement for cooperation arranged under section 123 of Title I." Since the United States does not, at this time, have an agreement for cooperation with the Soviet Union, pursuant to section 123 of the Atomic Energy Act, it would appear that the Soviet Union is not among the countries from which the Corporation could currently acquire enriched uranium. In any event, the Corporation may not desire to purchase Soviet enriched uranium, since such a transaction would involve the purchase of Russian uranium, in

derogation of the interests of the U.S. uranium producers. The present lack of a U.S. agreement for cooperation with the Soviet Union, pursuant to section 123 of the Atomic Energy Act, would appear to rule out entry into a toll enrichment contract with the Soviet Union, in which the Corporation would supply U.S.-origin UF_6 feed material for enrichment in Soviet facilities.

Until the Nuclear Non-Proliferation Act (NNPA) was enacted in 1978, U.S. persons were able, with the requisite NRC export license, to export "source material" (natural uranium and thorium) to the Soviet Union and other countries lacking a peaceful nuclear cooperation agreement with the United States. However, as interpreted by the State Department and NRC, the NNPA precludes exports of such material to countries, such as the Soviet Union, that lack a nuclear cooperation agreement with the United States. To obtain the necessary NRC export license, the exporter must demonstrate that the export criteria of Section 127 of the Atomic Energy Act are satisfied. To date, the export criteria of Section 127 have been satisfied through the pledges made by the recipient country in an agreement with the United States for cooperation in the peaceful uses of nuclear energy. Despite extensive cooperation between the United States and the Soviet Union in the field of nuclear safety, efforts are not now being made to negotiate an agreement for cooperation in the peaceful uses of nuclear energy.

It should be noted that H.R. 2480 does not invest the U.S. Enrichment Corporation with DOE's authority, under the Atomic Energy Act, to "distribute" natural and enriched uranium abroad

without obtaining an NRC export license. Section 111 of the Atomic Energy Act affords DOE the option of obtaining an NRC export license or pursuing section 111's procedure for Executive Branch authorization of DOE's overseas distributions of nuclear material. Before making such distributions under Section 111, DOE must obtain the concurrence of the Department of State and find "based on the reasonable judgment of the assurances provided and the other information available to the United States Government, that the criteria in section 127 of this Act or the equivalent ... are met, and that the proposed distribution would not be inimical to the common defense and security."

The Corporation's accession to DOE's distribution authority would not offer a way of delivering UF_6 feed material to the Soviet Union since such distributions are limited, by Section 64 of the Atomic Energy Act (42 U.S.C. §2094), to three metric tons (3,000 kg) per year per recipient. Thus, the maximum unlicensed feed material distribution to the Soviet Union would be around three orders of magnitude less than that required to supply the feed material for the approximately 2-5 million SWU per year that DOE is reportedly seeking to purchase from the Soviet Union.

If the U.S. Enrichment Corporation decides to engage in a business transaction with the Soviet Union, it may seek an arrangement that could be characterized as a purchase of Soviet enrichment services, without any requirement that the Corporation deliver UF_6 feed material to the Soviet Union for the performance of toll enrichment services. Borrowing concepts employed by U.S.

brokers and utilities, the Corporation may consider accepting delivery of Soviet enriched uranium in the United States, accompanied by the Corporation's delivery to Soviet representatives of a corresponding quantity of UF_6 feed material. Through such an arrangement, the Corporation could maintain that, although it was taking delivery of enriched uranium, it was actually purchasing only the Soviet enrichment services. An apparent disadvantage of such a transaction is that the feed material delivered to Soviet representatives would probably remain in the United States, thus reducing the benefits of such an arrangement to the domestic uranium producers, whose material would thus remain available for future feed material purchases by U.S. utilities.

If the Corporation purchased only the SWU content of Soviet enriched uranium delivered in the United States, it would thereby accomplish indirectly what could not be done directly - the shipment of natural UF_6 to the Soviet Union for toll enrichment. If such an arrangement is proposed, the Executive Branch and Congress may wish to consider the wisdom of actions that facilitate nuclear trade of a type that is normally carried out only pursuant to an agreement for cooperation.

If the U.S. Enrichment Corporation entered into a SWU purchase arrangement with the Soviet Union, questions may also arise about the consistency of such an arrangement with U.S. antitrust laws. An arrangement may be considered in which the Corporation takes all (or most) of the Soviet enriched uranium that is intended for the U.S. market. Such a transaction would have two apparent advantages

for the Corporation: (1) the Corporation would be able to purchase the Soviet enriched uranium at a cost considerably less than DOE's current cost of production; (2) through an exclusive relationship with the Soviet Union, the Corporation could seek to prevent U.S. utilities and other U.S. companies from taking advantage of the low priced Soviet material, except indirectly though their enrichment contacts. While such an arrangement might prove to be highly beneficial to the Corporation, it could be disadvantageous to U.S. utilities.

In papers given at industry seminars, managers of several U.S. utilities have discussed how they were able to achieve lower fuel cost and corresponding lower electricity rates, by purchasing low priced Soviet enriched uranium. It would be unfortunate if a transaction with the Soviet Union had the effect, even if unintended, of depriving U.S. utilities of their present freedom to shop for the arrangements that, in their judgment, will bring the utility the best results. It would be ironic if the Corporation, in creating a U.S. government-controlled source of Soviet enrichment services, emulated some of the features of the Soviet Union's centrally planned economy.

ANTITRUST PROVISIONS OF H.R. 2480

Section 1605 of H.R. 2480, entitled "Applicability of Antitrust Laws," provides that "the Corporation shall conduct its activities in a manner consistent with the policies expressed in the antitrust laws." Section 1605 of H.R. 2480 is in accordance with the Congress' previous insistence that government corporations

carry out their activities in accordance with U.S. antitrust laws. For example, in creating COMSAT, Congress specified that "the Corporation be so organized and operated as to maintain and strengthen competition in the provision of communications services to the public." (47 U.S.C. § 701). Congress also stated that COMSAT's activities "shall be consistent with the Federal antitrust laws." As is recognized in H.R. 2480, no less should be required of the U.S. Enrichment Corporation. Although section 1605 does not create a cause of action against the Corporation for violations of the antitrust laws, it makes the antitrust laws applicable to the Corporation's activities.

It must be noted that H.R. 2480 only requires the Corporation to comply with the "policies" set forth in the antitrust laws that are specifically enumerated in section 1605. As has often been observed, the antitrust laws express broad policies whose applicability to particular types of conduct has been the subject of hundreds of federal court decisions. Therefore, since the antitrust laws themselves express broad policies, H.R. 2480's requirement that the Corporation observe the "policies" expressed in these laws is arguably tantamount to a command that the Corporation obey the antitrust laws.

Section 1605's provisions would be important to the operation of the U.S. Enrichment Corporation, in view of its approximately 90 percent share of the domestic market. In my view, a substantial antitrust question would be presented if the Corporation entered into an agreement to purchase all, or a substantial portion of, the

output of the Soviet enrichment enterprise that had been allocated for the U.S. market. While the Corporation could argue that it was merely purchasing a commodity or service from another supplier, such an arrangement may be seen as a joint venture to market Soviet enrichment services in the United States. Such a transaction should be considered in light of applicable antitrust guidelines established by the U.S. Supreme Court, including the guidelines laid down in the landmark case of United States v. Penn Olin Chemical Co., 378 U.S. 158 (1963), in which the Court set forth the following guidelines for determining the anti-competitive effect of joint ventures:

- The number and power of the competitors in the relevant market;
- the relationship of their lines of commerce;
- the competition existing between them;
- the reasons for the joint venture;
- the potential power of the joint venture in the relevant market; and
- an appraisal of what the competition in the relevant market would have been if one of the joint venturers had entered it alone.

In applying the Supreme Court's guidelines in Penn Olin to the Corporation's purchase of Soviet SWU, an initial consideration is the small number of enrichment suppliers and the prominent place the Corporation would have in that market. Moreover, in view of recent testimony by DOE's officials, it is clear that DOE believes that the Soviet Union would be one of the U.S. Enrichment Corporation's main competitors. Any SWU purchase agreement between

the Corporation and the Soviet Union would be anti-competitive if it diminished the ability of U.S. companies to purchase SWU directly from the Soviet Union, or through private brokers.

The sensitivity, from an antitrust standpoint, of such a Soviet SWU purchase arrangement is further illustrated by the decision in Yamaha Motor Company, Ltd., v. Federal Trade Commission, 657 F.2d 971(8th Cir. 1981), cert. den. 456 U.S. 915. In the Yamaha case, the Eighth Circuit reviewed an FTC order finding that a joint venture to sell Yamaha-made outboard engines under the Brunswick name in the United States was prohibited because: 1) Yamaha may have been eliminated as a potential entrant into the U.S. outboard engine market; and 2) the joint venture agreement may have substantially reduced existing competition between Yamaha and other manufacturers in the United States market. The Court ruled that the FTC was correct in determining that any new market entrant of Yamaha's stature would have had an obvious pro-competitive effect, and thus, the agreement's provision that Yamaha could not market any non-joint venture product in the United States would have the effect of substantially lessening competition in the United States. In evaluating the possible purchase of enriched uranium or enrichment services from other suppliers, including the Soviet Union, the U.S. Enrichment Corporation would need to be particularly sensitive to the requirements of Section 1605, assuming that section is retained in an Act of Congress creating the Corporation.

Section 1605 is essential, in my view, to the emergence of private enrichment facilities, such as that planned by Louisiana Energy Services. If the new U.S. Enrichment Corporation were to conduct its activities in a manner that would be denied to private companies under U.S. antitrust law, the development of private enrichment facilities would be substantially hindered.

THE CORPORATION'S ACCESSION TO DOE'S ENRICHMENT CONTRACTS

Most of DOE's enrichment services are provided under the Utility Services Enrichment Contract (USEC), which was promulgated by DOE in 1984. Section 1403 of H.R. 2480 provides that "all uranium enrichment contracts . . . shall continue in effect with the Corporation assuming the rights and responsibilities of the Department." These enrichment contracts are considered by DOE to be among its principal business assets, and, at least initially, would constitute the Corporation's business foundation.

Although DOE's enrichment contracts may be its chief business asset, they are also increasingly a source of conflict between DOE and its utility customers. Therefore, it may be useful to outline briefly the chief areas of conflict, since the U.S. Enrichment Corporation would inherit these disputes.

A fundamental difficulty with the USEC is its failure to deal clearly with two matters that are at the heart of that contract: 1) what are the customer's requirements? and 2) when do they arise? As utilities seek to diversify their sources of supply and reduce nuclear fuel costs, questions are increasingly being raised about their contractual duties under the USEC. In a December 20, 1989

letter to USEC customers, DOE indicated that a customer's purchase of enriched uranium or fabricated fuel does not reduce the customer's requirements for enrichment services supplied by DOE. A customer that disagreed with DOE's view could decide to pursue a claim before the U.S. Claims Court, or the Energy Board of Contract Appeals, pursuant to the Contracts Disputes Act of 1978 (41 U.S.C. § 601 et seq). The Contract Disputes Act would apply to claims involving contracts with the U.S. Enrichment Corporation.

Since there are no judicial interpretations of the USEC, the outcome of a challenge to DOE's (or the Corporation's) interpretation of that contract may not be predicted with any certainty. However, in my view, well reasoned legal arguments may be put forth in support of a customer's position that its SWU requirements under the USEC are reduced by its purchase of enriched uranium or fabricated fuel. Strong arguments may also be made against DOE's views concerning the time when requirements arise under the USEC. As the inheritor of DOE's enrichment contracts, the U.S. Enrichment Corporation will bear the consequences of DOE's drafting of what is increasingly seen as a flawed contract. Therefore, it would seem advisable for the U.S. Enrichment Corporation to give high priority to section 1403's directive that "the Corporation may seek to renegotiate all such contracts, agreements, and leases without penalty to any party, and to conclude such renegotiations within five years after the date of enactment of this title." In so doing, the Corporation should prepare a contract that is free of the ambiguities and other

interpretative problems inherent in the USEC. In light of the competitive enrichment market place, the Corporation would also be well advised to develop flexible contractual provisions to meet the needs of individual customers. A single inflexible contract is no longer workable, in my view.

THE CORPORATION'S LEGAL ABILITY TO SERVE CUSTOMERS IN OTHER COUNTRIES

The status and prospects for U.S. peaceful nuclear cooperation agreements are pertinent to the business of the U.S. Enrichment Corporation since H.R. 2480 empowers it to "enter into contracts to provide uranium or enrichment services in accordance with, and within the period of an agreement for Cooperation under Section 123" of the Atomic Energy Act. H.R. 2480 thus recognizes that an agreement for cooperation between the United States and the recipient country must be in force if uranium enriched in the United States is to be exported to that country.

The chief uncertainty about the Corporation's future ability to service foreign customers arises from the uncertainty about whether the U.S. Agreement for Cooperation with EURATOM, which serves as the legal conduit for U.S. nuclear trade with the twelve EURATOM countries, can be renegotiated before it expires at the end of 1995. Discussions between U.S. and EURATOM officials have been on-going since 1978, regarding U.S. proposals for a new agreement containing the stricter cooperation requirements specified by the Nuclear Non-Proliferation Act of 1978 (NNPA). In view of the importance of this long-standing cooperative relationship, there is

reason to believe that a new U.S. agreement with EURATOM will be achieved before the existing agreement expires. However, a new agreement cannot be regarded as a foregone conclusion. The diplomatic and legal conundrum faced by the Executive Branch is to accommodate strongly held EURATOM views without triggering questions about a new agreement's compliance with the NNPA. Enrichment customers in the EURATOM countries would have the option of terminating their contracts with DOE, without penalty, if they were unable to obtain export licenses from the NRC because of the expiration of the U.S.-EURATOM Agreement.

The anticipated entry into force of two new U.S. nuclear cooperation agreements will present the U.S. Enrichment Corporation with the opportunity to pursue customers in the east European countries. In mid-September of this year, U.S. peaceful nuclear cooperation agreements with Hungary and Czechoslovakia were initialed by Ambassador-at-Large Richard T. Kennedy and his Hungarian and Czech counterparts. After undergoing review by the Executive Branch, the agreements will be sent to the President, who is expected to send them to Congress for the statutorily required 90 days of review. If difficulties do not arise, they could enter into force as early as May 1991.

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I hope that the foregoing comments will be of assistance to the Committee in its consideration of H.R. 2480.

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Biographical Information:

Born Tucson, Arizona, April 17, 1945. Admitted to bar, 1969, Arizona; 1970, U.S. Court of Appeals, Ninth Circuit; 1972, U.S. Claims Court and U.S. Court of Appeals for the District of Columbia Circuit; 1973, U.S. Supreme Court; 1975, District of Columbia; 1976, U.S. Court of Appeals, Third Circuit; 1984, U.S. Court of Appeals for the Federal Circuit; 1988, U.S. District Court of the District of Columbia. University of Arizona (B.A. 1966); University of Arizona College of Law (J.D. 1969); Member of the Bars of: the District of Columbia Court of Appeals; State Bar of Arizona; Federal, American (Member, Sections of: International Law and Practice; Patent, Trademark and Copyright Law; Natural Resources Law) and Inter-American Bar Associations; formerly Deputy Assistant General Counsel for International Affairs, 1977 - 1981, Department of Energy. Attorney with the Energy Research and Development Administration, United States Nuclear Regulatory Commission, the United States Atomic Energy Commission, and the United States Department of Justice. Former law clerk to the Honorable Richard H. Chambers, Chief Judge, United States Court of Appeals for the Ninth Circuit (1969 - 1970). Former Editor-in-Chief of the U.S. Department of Justice Land and Natural Resources Division Journal and Editor of the Arizona Law Review. Member: American Nuclear Society (Chairman, Bylaws and Rules Committee, 1987 - 1989); International Nuclear Law Association; Institute of Electrical and Electronic Engineers; Chairman of the Trade Issues Task Force of the U.S. Council for Energy Awareness; Received superior performance citations from the Department of Justice (1972), the Nuclear Regulatory Commission (1975), and the Department of Energy (1980).

Recent Professional Papers/Speeches:

"Shopping for Foreign SWUS and LEU: A Legal Perspective," presented to the United State Council for Energy Awareness Enrichment Seminar, Monterey, California, June 20, 1989.

"Uranium Issues at the End of the 100th Congress: The Uncertainties Continue," presented to the World Nuclear Fuel Market, 15th Annual Meeting and International Conference on Nuclear Energy, Seville, Spain, October 18, 1988.

"U.S. Legislative, Executive Branch, Regulatory, and Judicial Developments Affecting Trade in Uranium," presented to the Uranium Institute, Thirteenth Annual Symposium, London, England, September 7 - 9, 1988.

"Public Utility Commission Review of Nuclear Fuel Procurement: An Examination of Applicable Law and Present Practice," presented to the McGraw-Hill Nuclear Publications' Seventeenth Annual Conference, Washington, DC, May 2 - 3, 1988.

"Trends and Issues in Public Service Commission Review of Nuclear Fuel Procurement," presented to the Atomic Industrial Forum Uranium Conference, Jackson Hole, Wyoming, September 17, 1986.

The CHAIRMAN. Thank you, Mr. Glasgow.

And now we have back with us Mr. Joseph Paquette, who is the Chairman and Chief Executive Officer of the Philadelphia Electric Company. And we are welcoming you back so that you could join with us and give us your overview.

STATEMENT OF JOE PAQUETTE, CHAIRMAN, CHIEF EXECUTIVE OFFICER, PHILADELPHIA ELECTRIC COMPANY, PHILADELPHIA, PENNSYLVANIA

Mr. PAQUETTE. Thank you very much, Mr. Chairman.

The CHAIRMAN. Your statement will appear in full in the record.

Mr. PAQUETTE. Thank you. I'm sorry for the delay in getting back.

I'm Joseph Paquette, Chairman and CEO of Philadelphia Electric Company. Our company is the third-largest investor- owned nuclear utility in the United States. We own solely or jointly six nuclear units with nearly 4,000 megawatts of capacity, and we are the Department of Energy's fourth largest domestic enrichment customer. This year we expect to pay almost $40 million to DOE for uranium enrichment services.

I'm here today representing the domestic customers of DOE's uranium enrichment enterprise, or UEE, and I appear on behalf of the Edison Electric Institute and the American Nuclear Energy Council.

I'm summarizing my remarks this morning, but I request that my complete statement be made in the record, which you have already indicated it will.

I'd also like to start by saying that I support the testimony and the comments made by Secretary Moore earlier today.

On behalf of the electric utility industry, I'd like to commend Representatives Lloyd and Morrison and the other members of the Subcommittee on Energy, Research, and Development for their leadership in moving forward on H.R. 2480. This legislation is beneficial to both the taxpayers and our customers.

We believe that the bill reported out of the subcommittee will help revitalize the UEE so that it can compete effectively in the enrichment market. We urge the committee to move quickly to favorably report out H.R. 2480.

This legislation is essential if the UEE is going to stay in business. When the UEE's long-term contracts begin expiring in 1995, roughly 70 percent of the world's uncommitted demand for enrichment services will be from utilities in this country. At that time, the UEE will be just another player in a very competitive world market for long- term enrichment services. Clearly, in its present state the enterprise is not prepared for that challenge.

The UEE is losing utility customers because of its inflexible management and pricing structure. As customers, we cannot solve the program's problems, nor be blamed for its demise. Because the UEE is a government-owned business, only Congress can reform the program along more business-like lines so that it can compete effectively in the domestic and international marketplace.

We believe that the establishment of a government corporation is a sound and necessary first step to revitalizing the UEE. The op-

portunity for a government corporation to build a solid track record would also enhance the program's value if Congress later decides to privatize the enterprise in the future.

The subject of unrecovered cost is a real red herring. The fact of the matter is that UEE's commercial customers have financed every dollar of the program's cost for providing enrichment services as required by section 161(v). In addition, DOE's commercial customers have paid more than $6 billion in depreciation and imputed interest to the UEE in the 1970s and early 1980s, and those funds were used to expand capacity and for other purposes.

At no time during that period did DOE propose or Congress order that some of those revenues be paid to pay the treasury for the Defense Department's initial investment. Obviously, Congress never intended section 161(v) to require the UEE to pay the treasury for facilities that were built for and still serve defense purposes.

Unfortunately, the unrecovered cost issue has been one of the major stumbling blocks to achieving meaningful reform of this program. The National Taxpayers Union has been at the forefront of an ongoing misdirected effort to confuse Congress by calling the program's assets a debt. This beguiling campaign has stalled this vital energy legislation and threatens the future viability of the UEE.

If there is any debt involved here, the commercial customer should be reimbursed for providing the funds which the DOE has used for investment purposes.

Ironically, if the NTU is successful in stalling this proposal until the UEE is in shambles, future taxpayers will be left with the responsibility of paying an additional $300 million per year for defense enrichment needs and will have to absorb all the enterprise's undetermined cost for decontamination and decommissioning. That will certainly increase the deficit and not decrease it.

Under H.R. 2480, however, the UEE's commercial and defense customers will pay for D&D costs. The bill deals with this important responsibility in an equitable manner by requiring the corporation to price its services to create reserves to cover estimated D&D costs and by allocating D&D costs based upon the enrichment facility's historic use.

We believe that raising D&D funds through SWU prices will be an effective and equitable means for commercial customers to pay their fair share.

H.R. 2480 ensures that the UEE's customers will continue to bear the risks and costs of new technology investment and development. As discussed earlier, nearly $1 billion toward the development of the AVLIS technology has already been spent — all of it from revenues that the UEE has collected from customers over the years. No taxpayer dollars have been spent.

Under a restructured corporation, the decision to deploy AVLIS will be made in the same manner such economic decisions are made by any business. The corporation will go forward with AVLIS if it is a sound business decision.

The domestic utility industry would prefer to purchase uranium enrichment services from a domestic supplier under predictable and competitive terms. However, we have an obligation to our rate-

payers and our rate regulating bodies to keep our costs as low as possible. If the UEE is not operated on a more efficient and competitive basis, utilities will be forced to seek other reliable suppliers.

This week's announcement that the four New England utilities have contracted with the Soviets for enrichment services is a dramatic example of the current inability of DOE to compete. I fear that this will not be the last. There are likely to be many other such transactions if Congress again fails to restructure the UEE.

The result of no action by Congress will be damaging to the national economy, as has been enumerated earlier today. Quite frankly, the UEE is in a death spiral. Congress has been considering this subject for over six years. With effective and prompt restructuring, this scenario does not need to become a reality. The Subcommittee on Energy, Research, and Development has approved a bill that will enhance the stability of competitiveness of the UEE. If enacted, we strongly believe that the UEE can continue to be a national asset. We urge the full committee to move expeditiously to favorably report out this vital energy legislation. I think it is important to move quickly to send a strong signal to the utilities that there is hope that the Congress intends to make DOE a true competitor.

Prompt action is necessary to avoid further loss of UEE's market and to preserve what is left of this deteriorating asset.

Thank you very much. I'll be happy to answer any of your questions.

[The prepared statement of Mr. Paquette follows:]

Testimony by

Joseph F. Paquette, Jr.
Chairman and Chief Executive Officer,
Philadelphia Electric Company

on Behalf of the
Edison Electric Institute
and the
American Nuclear Energy Council

before the

Committee on Science, Space and Technology
U.S. House of Representatives

on

H.R. 2480,
the Uranium Enrichment Reorganization Act

October 11, 1990

Mr. Chairman and Members of the Committee:

I am Joseph F. Paquette, Jr., Chairman and Chief Executive Officer of Philadelphia Electric Company. Our company is the third-largest investor-owned nuclear utility in the United States. We own, solely or jointly, six nuclear units with nearly 4,000 megawatts of capacity, and we are the Department of Energy's fourth largest domestic enrichment customer. This year, we expect to pay almost $40 million to DOE for uranium enrichment services. In the first half of this year, 73 percent of our generating output was from our nuclear plants, leading to a fuel savings of $350 million for PE's 1.4 million customers.

I am here today representing the domestic customers of DOE's uranium enrichment enterprise (UEE), and I appear on behalf of the Edison Electric Institute (EEI) and the American Nuclear Energy Council (ANEC). EEI is the national association of investor-owned electric companies. Its members serve approximately three-quarters of all ultimate electricity customers in the nation. ANEC represents over 100 domestic and international organizations having an interest in nuclear energy.

On behalf of the electric utility industry, I would like to commend Representatives Lloyd and Morrison, as well as the other Members of the Subcommittee on Energy Research and Development, for their diligent efforts and leadership in moving forward on H.R. 2480, the Uranium Enrichment Reorganization Act. This legislation is beneficial to both the taxpayers and our ratepayers. We believe that the bill reported out of the subcommittee provides the reforms necessary to help revitalize the UEE so that it can compete effectively in the enrichment market. We urge the committee to move quickly to mark up H.R. 2480.

This legislation is essential if Congress is going to prevent a further collapse in the UEE's competitive position. Through 1975, the UEE maintained a monopoly on supplying the western world with enrichment services. Today, the UEE retains only about 50 percent of the world market, and its decline is continuing. It has lost over 30 percent of its market share since 1988.

When the UEE's long-term contracts begin expiring in 1995, roughly 70 percent of the world's uncommitted demand for enrichment services will be from utilities in this country. At that time, the UEE will find itself--for the first time in its history--as just another player in a very competitive world market for long-term enrichment services. Clearly, in its present state, the enterprise is not prepared for that challenge.

I would like to briefly review how the UEE went from yesterday's monopoly to today's struggling enterprise. As you know, the three enrichment facilities were built just after World War II for this country's defense programs. In 1969, the government began to provide enrichment services from these facilities to utilities. In allowing the Atomic Energy Commission this monopoly, Congress was careful to establish fair guidelines for pricing uranium enrichment services to commercial customers.

In 1973, the UEE imposed a rigid, long-term contract on its utility customers which exaggerated future demand for SWUs by forcing utilities to sign enrichment contracts for many nuclear plants that were still in the planning stages. This inflated demand ultimately had disastrous consequences for the program.

The UEE closed its order book in 1974 once it signed sufficient contracts to fill its existing capacity, thereby helping to create a market for foreign competitors. Because of the government's non-proliferation goals and a desire to recapture lost market share, President Carter announced in 1977 a new capacity expansion program based on gaseous centrifuge technology. This decision to build new capacity was also driven by a demand that was, in large part, artificial due to the inflexible contracts which prohibited utilities from reducing their orders to reflect changing conditions in the electricity market.

Because the UEE is mandated to pay all its costs through sales revenues, these expansion plans prompted DOE to increase its SWU price from $26 in 1970 up to $153 in 1984--a significant price increase that further undercut its share of the world market. By 1984, however, it was apparent that DOE was seriously burdened with overcapacity. In 1985, the gaseous centrifuge enrichment plant (GCEP) was abandoned.

DOE is continuing to lose more and more utility customers because of its inflexible management and pricing structure. We, as customers, cannot solve the program's problems. Because the UEE is a government-owned business, only Congress can reform the program along more business-like lines so that it can compete effectively in the domestic and international marketplace. If Congress does not act--and act soon--the United States is in danger of losing a business that is vital to our national security, provides thousands of U.S. jobs, and brings in foreign revenues that help with our balance-of-trade situation.

The proposal contained in H.R. 2480 to establish a government corporation to take over the UEE is not new. In 1984, a Tri-Committee Business Advisory Panel was established by this committee, along with the Energy and Commerce and Interior and Insular Affairs Committees, to review the operations of the UEE. The panel's most important recommendation was that:

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> Congress and the Secretary of Energy should take steps to establish a private business management structure for the enrichment enterprise. Alternative institutional structures under government ownership should be examined. The proper structure would further the business objectives of the enterprise and be compatible with an approach to privatization of enrichment services.

The Panel's recommendations are just as valid now as they were six years ago, if not more so. The recent Smith-Barney analysis of the UEE reaffirms the urgent need to restructure this program, and the utility industry supports the recommendations of the Smith-Barney study.

We are disturbed, however, that it has been six years since representatives of the utility industry first appeared before Congress to urge action, and Congress has completed none of its attempts to restructure the UEE. This issue has been thoroughly studied; restructuring is supported by DOE, outside consulting groups, private corporations, investment bankers, utility customers, and the GAO. The time to act is now.

We believe that the establishment of a government corporation is a sound and necessary first step to revitalizing the UEE. Under H.R. 2480, the corporation would be managed by a five-member Board of Directors, with day-to-day responsibilities entrusted to a chief executive officer.

The opportunity for a government corporation to build a solid track record also would enhance the program's value if Congress decides to privatize the enterprise in the future. Based upon the UEE's current position, the Smith-Barney report states that "the sale of the UEE to the private sector at this time would result in significantly less than optimal value to the Treasury."

H.R. 2480 resolves the contentious issue of alleged unrecovered costs by recognizing that commercial customers have paid their fair share of all costs. In fact, the program's commercial customers have paid excess revenues of $389 million over the last 20 years under the most conservative accounting assumptions. Furthermore, the Smith Barney report concludes that the commercial sector has overpaid the UEE by $1.17 billion, based on a fair allocation of past UEE expenditures.

The UEE's commercial customers have financed every dollar of the program's costs for providing enrichment services, as required by Section 161v of the Atomic Energy Act of 1954. In addition to paying for operating expenses, the commercial customers have paid more than $6 billion for imputed interest and depreciation over the last 20 years. The government chose to use these funds to finance

the UEE's research and development and capital construction projects.

Different interpretations of Section 161v, which is the pricing criteria for the UEE, lie at the heart of the debate over unrecovered costs. We, the UEE's commercial customers, paid billions of dollars in excess revenues to the UEE in the 1970s and early 1980s that were used to expand capacity. At no time during that period did DOE propose, or Congress order, that some of those revenues be used to reimburse the Treasury for the initial investment.

Obviously, Congress never intended Section 161v to require the UEE to reimburse the Treasury for facilities that were built for--and still serve--defense purposes. It is clear to the utility industry that Section 161v is a guideline for establishing prices; Section 161v does not require the transfer of any money from the UEE to the Treasury.

The commercial utility customers have paid the prices charged for enrichment services, and in doing so have financed all of the costs of those services, as well as providing significant excess revenues. Congress and DOE have made the decisions on how to spend the excess revenues. Therefore, to suggest that this legislation is a bailout for the utility industry is ludicrous. Attempting to collect a mythical debt from the customers of the UEE amounts to taxing Americans, who are both tax- and ratepayers, twice for an asset they have already paid for and currently own.

Unfortunately, the unrecovered cost issue has been one of the major stumbling blocks to achieving meaningful reform in this program. The National Taxpayers Union (NTU) has been at the forefront of an ongoing, misdirected effort to confuse Congress by calling the program's assets a debt. This beguiling campaign has stalled this vital energy legislation and threatens the future viability of the UEE. Ironically, if the NTU is successful in stalling this proposal until the UEE is in shambles, future taxpayers will be left with the responsibility of paying an additional $300 million annually for defense enrichment needs and will have to absorb all of the enterprise's decontamination and decommissioning costs.

Under H.R. 2480, however, the UEE's commercial and defense customers will pay for decontamination and decommissioning (or D&D) costs. The bill deals with this important responsibility in an equitable manner. First, the bill's pricing criteria requires the corporation to price its services to create reserves to cover estimated D&D costs. The bill establishes a separate D&D fund into which 5 percent of the program's gross revenues are to be deposited. The government is required to deposit an equal amount into the fund to cover the government's obligations arising from defense enrichment services.

The bill also equitably allocates D&D costs so that the government is responsible for those cleanup costs resulting from enrichment activities before 1969, prior to the use of the facilities for commercial enrichment services. Decontamination and decommissioning costs resulting from activities from 1969 to the bill's enactment are split 50-50 between the government and the corporation. We believe this is a fair position despite the fact that these facilities were every bit as contaminated in 1968 as they were in 1969 or will be in the year 2000.

For those who are skeptical that this approach will raise sufficient funds to pay for D&D, I would remind them that the commercial customers of the UEE, in addition to fully covering operating costs, have paid over $6 billion in depreciation and imputed interest over the last 20 years. We believe that raising D&D funds through SWU prices will be an effective and equitable means for commercial customers to pay their fair share.

However, we firmly believe that the corporation cannot serve as a "cash cow" for the Treasury and still meet its responsibilities to pay for D&D costs. If the corporation is heavily burdened with a requirement to send billions of dollars to the Treasury as well as to set aside money for D&D expenses, the corporation may actually end up in a worse competitive position than the current DOE program because its customers will continue to abandon it for more competitive services.

H.R. 2480 ensures that the UEE's customers will continue to bear the risks and costs of new technology investment and development. For example, nearly a billion dollars toward the development of the Atomic Vapor Laser Isotope Separation (AVLIS) technology have already been spent, all of it from revenues that the UEE has collected from customers over the years. No taxpayer dollars have been spent.

Under a restructured corporation, the decision to deploy AVLIS will be made in the same manner such economic decisions are made by any business: the corporation will go forward with AVLIS if the final analysis indicates that it can be built and operated within budget and if the Board determines that AVLIS will be a more profitable option than its other choices. Since a corporation is relatively insulated from political pressures, we believe that it will be in a better position to make the tough economic decisions related to AVLIS.

If it is deployed in a timely manner, AVLIS will provide the corporation with an opportunity to recapture a significant portion of the enrichment market. Also, AVLIS will provide the Department of Defense with inexpensive enrichment services well into the next century.

I would also like to point out that if Congress moves quickly to restructure the UEE so it can be an attractive candidate for privatization in the next few years, it is possible that the decision to deploy AVLIS will be made by a private company. In either case, the customers will bear the cost of moving forward with the next generation of enrichment technology.

H.R. 2480 reaffirms DOE's decision to write off non-productive assets such as the uncompleted GCEP and excess capacity operations, along with the associated imputed interest. DOE already has written off a portion of these assets. While GAO does not believe that DOE has the authority to do so, GAO nevertheless has recommended that Congress allow DOE to write off at least $4.1 billion in costs on non-productive assets.

We fully support this provision of the bill. First, it will help diffuse the divisive unrecovered cost issue. Second, the write-off is compatible with standard business practices. According to the Smith-Barney report, "For most commercial enterprises, excess capacity costs and abandoned plant are never recoverable from customers."

Finally, I would like to comment on the pricing criteria included in H.R. 2480, which directs the corporation to establish prices that will allow it to maximize long-term returns. The utility industry believes that this criteria provides the corporation with the necessary flexibility to compete effectively while maximizing the value of the enterprise for taxpayers.

This is perhaps the single most important restructuring provision because it allows for a business approach to contracting services. The UEE's competitors have this flexibility, which has enabled them to undercut the UEE and garner a larger market share.

The domestic utility industry would prefer to purchase uranium enrichment services from a domestic supplier under predictable and competitive terms. However, we have an obligation to our ratepayers and our rate regulating bodies to keep our costs as low as possible. If the UEE is not operated on a more efficient and competitive basis, utilities will be forced to seek other reliable suppliers.

We are confident that without restructuring of the UEE additional lower cost enrichment capacity will be available to absorb those customers leaving DOE in the next ten years as their commitments expire. DOE's foreign competitors are closely watching to see what happens to the UEE in the next several years.

As I mentioned before, the commercial utility industry, as a customer of the UEE, cannot solve the program's problems. That responsibility rests with DOE and Congress. The administration and Congress can either effectively restructure this program or take no action and allow the program to continue its decline.

We believe that inaction by Congress will be taken as a signal that there will be additional unmet demand in the U.S. market--a demand that DOE's competitors will be eager to meet. Illustrating this reality is the proposed enrichment venture in Louisiana. This venture could construct a completely new and independent enrichment plant within the United States using European centrifuge technology.

Opponents of H.R. 2480 have argued that U.S. utilities have no alternatives to DOE for enrichment services. Yet, the Wall Street Journal reported earlier this week that four U.S. utilities have contracted with the Soviet Union for enrichment services for 1994 through 2002. The article states that if the utilities had contracted with DOE, they would have had to pay 25 percent more.

The Journal article notes that this is the first time that a Soviet plant will be processing uranium for direct sale in the United States. I fear that this will not be the last. This is likely to be the first of many such transactions if Congress again fails to restructure the UEE.

The result of no action by Congress will be damaging to the national economy: loss of payments to the Treasury, loss of more than 5,500 U.S. jobs, a worsening of our balance-of-trade position, and an increase in the cost to taxpayers of enrichment for national defense purposes and for unfunded liabilities such as decontamination and decommissioning. The United States also would lose a domestic capability that is important to its energy security.

With effective and prompt restructuring, this scenario does not need to become a reality. The Subcommittee on Energy Research and Development has approved a bill that will enhance the stability and competitiveness of the UEE. If enacted, we strongly believe that the UEE can continue to be a national asset that helps to ensure our national security, creates jobs, and provides a return to the U.S. Treasury. We urge the full committee to move expeditiously to favorably report out this vital energy legislation.

The CHAIRMAN. Thank you very much.

The Chair recognizes the distinguished gentlelady, the chairman of our subcommittee, Mrs. Lloyd from Tennessee.

Mrs. LLOYD. Thank you very much, Mr. Chairman. We thank the witnesses for being with us today.

Mr. Chairman, these are very enlightening hearings. My only regret is the members that requested this hearing after I have had three in my subcommittee are not here to benefit from the testimony.

The CHAIRMAN. I have made that point forcefully.

Mrs. LLOYD. Mr. Sommerfeld, Martin Marietta is a private sector corporation. If you were running the enrichment program without any DOE directives or regulations, how would it be doing business differently?

Mr. SOMMERFELD. I think it would do essentially many of the things that have been talked today—talked about. We would offer flexible contracts. We would have a totally different pricing approach to the business. We would recognize that the needs of the utilities, although similar, are not identical, and that there are more than just the commodity of enriched uranium to offer. There are services that can enhance their interest and willingness to buy from a supplier beyond simply the commodity of enriched uranium.

And so I think the business must become totally customer oriented as opposed to "I have the best mousetrap. Beat your way to my door." So I think there are a number of things like that.

Mrs. LLOYD. That just doesn't work today.

Mr. SOMMERFELD. I think as a business it would borrow money at appropriate times to take advantage of unique circumstances which would help it in the long run. One that I can think of is unfirm power—power that is available from utilities off hours, the generators are running, they're happy to sell it at a reduced rate rather than have no customer. That significantly reduces our power cost and reduces factory cost.

Mrs. LLOYD. In other words, you'd inject a little bit of common sense into the operation.

[Laughter.]

Mr. SOMMERFELD. Well, let's say we would try to be more commercial about it.

Mrs. LLOYD. Do you think Martin Marietta would be interested in operating only the Portsmouth plant for defense purposes?

Mr. SOMMERFELD. Well, I think we haven't thought about it in that way. I think Martin Marietta is interested and believes that the business is there and the marketplace is there, that there is a role for—in the future—for the plants or the approximate size or capacity that we now have. That requires more than one plant.

Mrs. LLOYD. So basically that couldn't be a reality.

Mr. SOMMERFELD. You can speculate, depending upon the death spiral that was referred to here. You can speculate on a point in time where maybe the sales, if you will, would require only one plant. But we tend to be a bit more optimistic. We tend to believe that you will respond with this legislation, it ultimately will be successful, that the tenure of the business will change, and I don't believe that — I hope that circumstance won't occur.

Mrs. LLOYD. Well, there has been some discussion in our hearing today about private sector deploying AVLIS. Do you see any opportunity in the private sector? Any interest to deploy AVLIS?

Mr. SOMMERFELD. I don't think there is right now, and I say that because I think the private sector recognizes there is more capacity than there is demand. I think the economic market and the business—

Mrs. LLOYD. The long-term investment.

Mr. SOMMERFELD.—market will determine that. I think AVLIS should be deployed if and when it is clearly proven to be a significant advantage to the current enterprise. I think we're all optimistic about that. I think we're all hopeful about that, but it has not been totally proven yet.

Mrs. LLOYD. Well, you, as well as I—you are aware as I am of the shock that went into the marketplace when we—

Mr. SOMMERFELD. Yes.

Mrs. LLOYD.—ceased our research and development on the centrifuge program, and we don't want to send mixed signals to our customers any more than we have at this point. I think you'll agree with that.

Mr. SOMMERFELD. Yes. Yes, ma'am, I do.

Mrs. LLOYD. Okay.

Mr. Paquette, would you care to comment on the statement that one mil per kilowatt hour is an insignificant payment from your revenues?

Mr. PAQUETTE. I haven't heard that, but I'd be very happy to comment on it because I think any factor of cost is significant. One mil for some companies would be a high percentage of their cost. We are currently paying a mil per kilowatt hour for waste storage. It amounts to billions and billions of dollars nationwide—over a period of years, of course.

But we are in a mode right now—and particularly in my company, but most utilities are doing everything that we can to hold costs down. So even a mil per kilowatt hour could be significant to some companies.

Mrs. LLOYD. So if the Congress should—heaven forbid — should choose to tax utilities one mil per kilowatt hour to clean up and to provide for D&D, then this would really make a big dent in your rates, wouldn't it?

Mr. PAQUETTE. It could have a significant impact on a number of companies. Yes.

Mrs. LLOYD. What is your utility's view of AVLIS? Do we need it?

Mr. PAQUETTE. I personally am not educated enough on the technology to comment. I just would like to support the previous comments that when it comes time to make a decision on AVLIS I think the country will be better served by having that decision made in a business environment rather than a bureaucratic environment. I'm confident that when that decision comes to be made, if the corporation is set up, whether it be still government owned or privatized, it will be made on the basis of can it make a profit or can it add to the bottom line. That is what has been lacking in the past.

Mrs. LLOYD. But it will be a business decision and not a political decision?

Mr. PAQUETTE. That's right.

Mrs. LLOYD. Thank you.

Mr. Glasgow, would you care to comment on the decision to go with AVLIS?

Mr. GLASGOW. As a lawyer, I haven't much expertise on that aspect. I feel that the marketplace should make the decision in that respect and that it would be fine if the U.S. utilities had a vibrant U.S. enrichment corporation out there to serve them. I think that that enrichment corporation, however, should operate in a way that its activities do not deter from the entry of new enrichment ventures into the private market. Nor should the establishment of the corporation be accomplished on the premise that its activities can be protected through import barriers.

Mrs. LLOYD. Well, as a lawyer would you care to comment on the charge that the Soviets are dumping on the international market?

Mr. GLASGOW. Well, I have heard that DOE at one time was considering bringing or asking the Commerce Department to initiate an anti-dumping investigation on the theory that the Soviets must be selling into the market at less than fair value. DOE did not follow through on that. I don't know what lesson we can derive from it. One lesson might be that it is quite difficult to determine what the cost of production is in a non-market economy. There are anti-dumping cases involving Soviet and Eastern Bloc products. Many of them found that there was no dumping.

A major difficulty is always the cost of production. How do you determine that in the case of the Soviet Union? You can use a surrogate country. It is hard to find one. You can try to analyze the factors and cost of production.

In my opinion, the bottom line is that it is difficult to make a case that will stand up in this instance, and that may suggest why DOE has not pursued this remedy.

Mrs. LLOYD. Thank you very much.

Thank you, Mr. Chairman.

The CHAIRMAN. Well, I thank the gentlelady, and I thank all of our witnesses.

You know, I believe it was Mr. Sommerfeld that made the point that—you spoke first, right?—was assuming that we want to retain a domestic source. That is not just a flip of the hand; that's very important because the general attitude around here seems to be, "Well, we've spent our time and energy to get together and get to know each other." The general attitude in Congress—one of the attitudes in Congress is that Congress should not be—let the marketplace seek its level and we should not be picking winners or losers, but the marketplace can do it better and private enterprise can do it better.

Well, assuming that if it were a perfect world and that were the case, that would be fine. But it is not a perfect world and that's not what is happening to us in this country in every single industry that we're dealing and every advanced technology we have. Let the marketplace do it. Let the marketplace do it. Now we're losing our computers. Now we're losing our computer chips. Now we lose this industry. Now we lose our steel industry. Now we lose this industry.

You know, the consumer—and I guess I can say it and shouldn't say it three weeks before an election, but I'll say it anyway—is that the—you know, one of the arguments in the textile issue was that it was an anti-consumer vote if you vote to override the veto because the clothes were less expensive and the garments were less expensive coming from overseas, whether it be Korea or Singapore, and the whole bit.

But I think that some of you have picked up in your general discussion not the writs and torts, if I may, Mr. Glasgow, or the financing aspect of it, or what would happen if this happened, but you talked about what about the economic base of this country. That is really what the issue is being lost. Everybody is nitpicking on this and that, but they're not talking about the strength of this Nation.

In my judgment, I happen to believe that the energy sources and the energy policy that we are long overdue on really determines the whole dynamics of this country—its ability to survive itself and its ability to be able to function in an international marketplace.

When we had the argument over the increase in gasoline prices and the whole country shot each other in the line, that wasn't the issue at all. The fundamental issue was the cost of energy to production. If you increase the oil cost from $20 a barrel to $40, it has cost us 100 percent increase cost and loss—enormous loss of capital out of this country.

So I don't—I think that when we look at nuclear generation—and then I think we're on the point of a revolution about to take place. American people and the rest of the people have got to realize in this world nuclear energy is here to stay and it is going to be part of the system. In fact, we just had a note someone sent up that said Korea is talking about building two new nuclear generators a year for the next X number of years. There will be another 20 or 30 generators built, etc. But I don't think we ar attacking this problem correctly.

Let me make two observations, and I think Mrs. Lloyd made it very, very strongly.

One of the reasons we are holding this hearing was to help to educate people that more mistakes are made from lack of facts than from poor judgment. This is a very complicated, fundamentally difficult issue to understand. We are not just talking about bringing in material and doing this; we're talking about the whole gamut economically, engineering-wise, technically-wise. Assumptions are being made, and we're bringing in some of the best people in the country to discuss with us today.

But the fact remains that the attention span of some of our members is a little bit short, I regretfully say, and some of the folks that have raised the concerns are not here to hear the facts. But I guarantee you—and don't think I won't say this publicly, and I will when the time is at hand — that those very same people who are flies in the ointment or have other ideas, which I respect and understand—but you don't have the right to stop the Nation when you haven't got time to be here when people come from all over to testify to bring you the facts to understand in the first place. Do you understand where I'm trying to come from?

Now, why do I say that I think there is a problem here? And I'm not talking about whether we should take the transition, whether we should adopt this legislation at all. I think that you're probably on the right track.

But I think, in my judgment, there is not enough that has been put into focus that people can judge this situation on. In other words, the environmental issue happens to be an extraordinarily important issue. I don't think that's a snap decision—well, okay fellows, it's all over, and whatever— because we wouldn't be doing the three-mile limit and the other projects that we are working on if it wasn't environment. That's the issue that is concerning everybody.

But from what I am hearing in the testimony today, in order to resolve the pre-environmental problem and look to the future you should keep going and use the resources you have to achieve that goal. Otherwise the taxpayers are going to be saddled with a humongous bill that they are going to have to pay.

If you'll indulge me for a moment—and I have listened intently to everybody else—where superfund is involved the assumption that that technology on lining pits with clay is going to solve the superfund toxicity problems of this problem is absolute—you know, people must be out of their mind, and they're spending billions and billions of dollars to do that today. That's an item I think that has to be dealt with here.

I think the second point that we're talking about—the AVLIS information—we just don't have enough information. But the country is committing itself, at least at the moment, you know, to $35 billion for a space station; and we have committed ourselves to at least $5 billion on the Superconducting Super Collider, and so the big science issues go. We don't know what the hell is going to come out of that thing at the end, but we're able to get the Congress to make that kind of a commitment. It is partial political and it is partial economic. That's what it amounts to.

So therefore I think that this picture must be painted in a clear point with its pluses and minuses and pros and cons. Nobody in industry is going to touch this privately with a ten-foot pole unless you get a guarantee. You couldn't do it and survive it. You wouldn't dare spend your customer's money. They wouldn't let you do it.

So I think that we are in the right direction. I think that it needs refinement. I think we have to put together what is the true fact upon the American people from a taxpayer's point of view. What is the country's national policy—if we ever had one—on energy? What is the direction that we choose this country to go from a national heritage, if you like or, more important, from basic national assets. I think that's what we have to do.

I frankly don't believe that Congress understands the issue, if I may say.

Mr. PAQUETTE. Mr. Chairman, may I make a comment?

The CHAIRMAN. But of course.

Mr. PAQUETTE. I can understand your desire to have as much information as you possibly can to make an informed decision, but I would like to repeat my last comment that I think time is running out. And if you—the way I look at it, if the Congress enacts the

legislation to allow at least the first step to take place of setting up a government-owned corporation, I don't think that there is much downside risk. It could be considered a trial period. You could have the AVLIS decision made in a business fashion rather than in a political fashion. You'd at least have the ability to let the UEE enterprise compete—

The CHAIRMAN. We may be—

Mr. PAQUETTE.—worldwide to at least arrest a further decline and buy a little time to see whether the structure will work and whether there are investors out there who are willing to come in and make that capital investment, and it always can be reversed. If that doesn't work, it can always reverse it before you go on a privatized basis.

So I would encourage you that, while perfect information would be nice to have, I don't think you have time to wait for it to come in.

The CHAIRMAN. Now if the gentlemen would yield, perhaps I thought I was more articulate than I really was. I'm not negative at all, but I guarantee you if Bob Roe was to take this packet and— I couldn't even get on the damn agenda before this year is up because the members don't understand the issue. We haven't educated 435 men—hear me out, sir. We haven't educated them, regardless of the merit of the case.

Mr. PAQUETTE. Yes. I—

The CHAIRMAN. What we have to do, if you hear me out— it is decided there. What we have to be able to do is to make a presentation in such a way that people will understand what we're doing. I think our people have done an extraordinary good job. I don't think there is any question about it. We have some additional work that is going to have to be done on this issue to convince the members on this committee that they should vote it out of this committee.

Mr. PAQUETTE. As far as that latter, I can understand that. If you're waiting for the right time to get the entire House up to speed, it has been six years now since this recommendation has been considered. I think the important thing is that this committee—

The CHAIRMAN. It has been six years. That's got to tell you, as CEO and chairman of the board, it's got to tell you something. You didn't convince your board of directors very well.

Mr. PAQUETTE. But I think the critical thing is if this committee passes the bill or approves the bill you'll send a signal to the utilities that there is support for straightening out DOE's enrichment services so we'll have confidence that there will be some progress made. Otherwise, they're just going to continue to lose market while there is no favorable signal out there.

The CHAIRMAN. I understand that. We're still not communicating. I'm an optimist. I'm in favor of what we are attempting to achieve. Me. The gentleman from New Jersey. There are 51 people on this committee, and, if you'll notice, the two most important people that are members are here— that's Mrs. Lloyd as chairman of the subcommittee and Chairman Roe, chairman of the full committee. Now, that means we need 47 more. And I have to go out into the hinterlands and the highways and the byways and see

what I can do to try to generate the interest and the enthusiasm that you all share.

Mr. PAQUETTE. I don't envy your challenge.

The CHAIRMAN. No. It's fun. That's the nature of the job.

Let me thank you a lot.

The hearing—and please believe me if I can say this from my point of view as chairman of this committee: don't feel distressed because there weren't as many people as we would like. We'd like to have had them all here because we were trying to help educate them. That's what it amounted to. And to some degree we have. But I think what you've done is brought the picture very clearly together. I think you have done something that hasn't been done before: you've crystallized in my mind a half a dozen key points that now have to be brought together into how we can pursue and what direction we can go.

I agree with you. I don't think that the country should sit and fritter while Rome burns. Economically and every other area in which we are working in we run into the same damn situation whether they're talking about biotechnology, whether they're talking about Superconducting Super Collider, the space program. There are those people that are so against everything. I wonder where the country would have been unless somebody had the guts to make some decisions and get something done.

So, as you can see, I'm not mealymouthed, or whatever. That's how I feel about it.

Have faith and patience. We will achieve this goal in due course.

Anything further that must be said here?

[No response.]

Mr. PAQUETTE. The gentlelady? Nothing further?

Mrs. LLOYD. Mr. Chairman, thank you for calling the hearings. They have been very enlightening. Again, I'm sorry that more members are not here, but the hearings were good. We thank our witnesses.

The CHAIRMAN. Thank you very much gentleman. We appreciate your participation.

The hearing stands adjourned.

[Whereupon, at 2:33 p.m., the committee was adjourned, to reconvene at the call of the Chair.]

APPENDIX

Department of Energy
Washington, DC 20585
January 10, 1990

The Honorable Hank Brown
Chairman-Elect
Committee on Science Space and Technology
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

On October 11, 1990, Deputy Secretary, W. Henson Moore testified before your Committee on H.R. 2480 the Uranium Enrichment Reorganization Act.

Following the hearing, the Honorable Robert A. Roe submitted written questions to supplement the record. Enclosed are answers to questions 2, 6, 10-12, and 16-19. We are still preparing questions 1, 3-5, 7-9, 13-15 and 20 and our response will be forwarded to you as expeditiously as possible.

If you have any questions, please have your staff call Barbara Campbell on (202) 586-8238. She will be happy to assist you.

Sincerely,

Jacqueline Knox Brown
Assistant Secretary
Congressional and Intergovernmental Affairs

Enclosures

QUESTIONS FROM CHAIRMAN ROE

Decontamination and Decommissioning

Question 2: What is the Department's best estimate of the costs for remedial action and for D&D of the Gaseous Diffusion Plants? What is known about the extent and nature of these problems? What has yet to be determined?

Answer: The Department of Energy (DOE) has estimated the cost of remedial action at the three gaseous diffusion sites through FY 1995 at nearly $700 million. Cost estimates for remedial actions at the gaseous diffusion plants are reevaluated annually and revised, as necessary, by the end of each fiscal year.

DOE has estimated the cost of decontamination and decommissioning (D&D) for the three gaseous diffusion plants at $3 billion. In October 1990, DOE-initiated efforts to reevaluate this estimate in order to generate a more comprehensive assessment of potential D&D costs. This reevaluation will be completed by September 1991.

DOE is actively studying the extent and nature of the radioactive and hazardous material contamination at the gaseous diffusion plants. At Paducah, some contamination has been found in the groundwater and 95 separate areas involving solid wastes. At Portsmouth, some contamination is known to

Answer 2 (continued): exist in groundwater, surface water, and 44 separate areas involving solid wastes. Resource Conservation and Recovery Act Facility Investigations (RFIs) are underway at Portsmouth and Paducah. The RFIs will provide a sound basis for planning remediation activities by determining the types and extent of contamination that require remediation.

QUESTIONS FROM CHAIRMAN ROE

AVLIS

Question 6: Is it possible now for DOE to form some kind of partnership or consortium with the private sector to kindle investment into the AVLIS technology? Is it necessary that the government deploy this technology?

Answer: Private investment into the AVLIS technology is not likely until technology demonstration has been completed by the end of 1992. This demonstration must provide technical performance and meet financial parameters consistent with investment criteria and market tests that the private sector typically applies to such decisions. This view of the potential for private investment was provided in 1986 when no interest was expressed in response to a solicitation by the Department of offers for private investment in AVLIS. Further reinforcement of this lack of interest has been provided by a number of private firms, most recently by the investment banking firm of Smith Barney, that the Department must first complete demonstration of the technology before any private investment can be expected.

After the technology has been successfully demonstrated, conditions that would support private investment may be available. The issue of whether it is necessary for the

Answer 6
(continued): government to deploy the AVLIS technology will be definitively addressed when the technology demonstration has been completed.

QUESTIONS FROM CHAIRMAN ROE

Unrecovered Cost

Question 10: How much money has been reprogrammed from the enrichment enterprise to fund other activities of the Department of Energy over the past 10 years--please provide this in yearly amounts. Since the enterprise is charged with recovering all costs of operations, does this mean, as some have alleged, that the utility industry is, in fact, subsidizing government operations?

Answer: Over the past 10 years, approximately $1.3 billion in unobligated appropriations has been transferred from the Uranium Enrichment enterprise to fund other Departmental programs. These transfers are shown by year on tables 1 and 2. It should be noted that of this amount, approximately $1.1 billion are transfers initiated by Congress. Since this $1.3 billion was not applied to carry out any enrichment activity, these funds were not included in the cost of enrichment operations that are charged to customers in the price they pay for enrichment services. Therefore, the utility industry has not been charged for any portion of the $1.3 billion that was transferred to other Department programs and no subsidy by utilities of these other programs has occurred.

Answer 10
(continued):

Table 1

List of Funds Transferred from the
Uranium Supply and Enrichment Activities Appropriation

Transfers Initiated By Congress

FY 1983	
Transfer to Small Business Innovative Research (S.B.I.R.)	$ 220,000
FY 1984	
Transfer to S.B.I.R.	1,036,800
FY 1985	
Transfer to S.B.I.R.	1,408,000
Transfer to Geothermal Loan Program	25,000,000
Transfer to Energy Supply R&D	60,000,000
FY 1986	
Transfer to S.B.I.R.	1,370,750
Transfer to Energy Supply R&D	200,000,000
Transfer to Geothermal Loan Program	15,000,000
FY 1987	
Transfer to S.B.I.R.	906,250
Transfer to Energy Supply R&D	684,158,000
FY 1988	
Transfer to S.B.I.R.	925,000
Transfer to Energy Supply R&D	104,000,000
FY 1989	—
Transfer to S.B.I.R.	1,482,500
FY 1990	
Transfer to S.B.I.R.	1,541,000
Total, Transfers Initiated By Congress	$1,097,048,300

Answer 10
(continued):

Table 2

List of Funds Transferred from the
Uranium Supply and Enrichment Activities Appropriation

Transfers Initiated By The Administration

FY 1981		
Transfer to Departmental Administration.....	$	800,000
FY 1984		
Transfer to Clinch River Breeder Reactor....		122,600,000
FY 1986		
Transfer to Energy Supply R&D.....		331,022
Reprogramming to ES&H.....		250,000
FY 1987		
Reprogramming to Energy Supply R&D.....		11,600,000
FY 1990		
Repayment of an FY 1989 Advance from the Departmental Administration Account.....		20,000,000
FY 1991		
Reprogramming to Energy Supply R&D.....		20,000,000
Total, Transfers Initiated by the Administration.....		$175,561,022

Note: Excludes reprogrammings between Uranium Enrichment program accounts, congressionally mandated Gramm-Rudman-Hollings reductions, and other congressionally mandated general reductions.

QUESTIONS FROM CHAIRMAN ROE

AVLIS

Question 11: Will the proposed AVLIS facility designed for commercial customers be able to produce highly enriched uranium for the defense needs? What is the limit on the grade of enrichment for the projected AVLIS facility?

Answer: The proposed AVLIS facility will not be able to produce highly enriched uranium. It is not designed to do so and cannot be easily reconfigured for that task. The plant is designed to produce a range of assays of low enriched material, depending on the demands of the customers. The highest assay produced will be about 7 percent.

QUESTIONS FROM CHAIRMAN ROE

Production Capacity

Question 12: What percentage of capacity is currently being used at Paducah and Portsmouth?

Answer: About 60 percent of the total production capacity at Paducah and Portsmouth is currently being used to meet customer demand.

QUESTIONS FROM CHAIRMAN ROE

Question 16: Does DOE intend to undertake the D&D study suggested by Smith Barney? If so when? Is the Department's report going to include recommendations or simply outline options? Will it include estimates?

Answer: In October 1990, the Department of Energy initiated efforts to reevaluate its previous decontamination and decommissioning (D&D) study in order to generate a more comprehensive assessment of potential D&D costs as suggested by Smith Barney. This reevaluation will be completed by September 1991. Alternative technical approaches for D&D will be evaluated and a preferred approach will be identified. Cost estimates for the D&D approaches that are evaluated will also be developed.

QUESTIONS FROM CHAIRMAN ROE

Soviets

Question 17: The Wall Street Journal reported a contract agreement between the USSR and several New England utilities for a reported $250 million. The beginning date of this arrangement is 1994. Could you explain the impact of this supply agreement on the enrichment enterprise? Are any of these utilities currently buying enriched uranium from the UEE?

Answer: In addition to taking away a sizeable sales opportunity from DOE, this is the first long term Soviet supply contract with a U.S. utility and it will very likely facilitate Soviet efforts to further penetrate the price-sensitive U.S. enrichment market. The New England utilities referred to in the article do not presently purchase uranium enrichment services from the Department of Energy.

QUESTIONS FROM CHAIRMAN ROE

Soviets

Question 18: What protection is there for the proposed corporation if the Soviets get more aggressive in marketing their excess capacity?

Answer: The best means for the proposed corporation to compete with more aggressive Soviet market activities on a fair trade basis would be to equip the corporation with commercial flexibilities that are typically utilized by private sector businesses. However, the Department agrees with Smith Barney's conclusion that not even a corporation could successfully compete at the price levels that the Soviets are reported to be offering.

QUESTIONS FROM CHAIRMAN ROE

Question 19: Is the Department still trying to work with the Soviets to purchase or otherwise control the amount of Russian material entering the U.S.? Please discuss.

Answer: The Department has submitted the issue of purchasing Soviet enrichment to interagency review within the Administration. This matter remains under consideration by the Administration and no conclusion has been reached.

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
SUITE 2321 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 226-6371

November 7, 1990

The Honorable W. Henson Moore
Deputy Secretary
U.S. Department of Energy
Washington, D.C. 20585

Dear Mr. Secretary:

Thank you for your excellent testimony at our Committee hearing on H.R. 2480, the Uranium Enrichment Reorganization Act on October 11, 1990. Your comments were most helpful to the Committee. A copy of the hearing volume will be forwarded to you as soon as it becomes available.

Unfortunately due to time constraints and budget matters, the Committee is unable to move forward on this legislation. However, I believe this issue warrants a high priority in the 102nd Congress, and I am committed to devoting time and attention to this important matter when the new Congress convenes.

In view of these circumstances, the record for our October 11, 1990 hearing takes on added importance. We would like to supplement the record of the hearing with your written responses to the attached questions. We would appreciate receiving your responses within three weeks from the date of this letter. Please forward this information to the Subcommittee office, B-374 Rayburn House Office Building, Washington, D.C. 20515, to the attention of Kathryn Holmes. A copy of the hearing volume will be forwarded to you as it becomes available.

With best regards,

Sincerely,

ROBERT A. ROE
Chairman

RAR:Scf
Attachment:

Attachment: Questions

November 7, 1990

Honorable W. Henson Moore
Deputy Secretary
U.S. Department of Energy
Washington, D.C.

1. What is the cost of production today for Naval fuel? What would it be without the civilian enrichment program?

2. What is the Department's best estimate of the costs for remedial action and for D&D of the Gaseous Diffusion Plants? What is known about the extent and nature of these problems? What has yet to be determined?

3. How will restructuring to a government corporation help solve the problems of the enterprise? What would really be different? Several specific examples would be most helpful.

4. If the current legislation is enacted, who will bear the risk for future technology development? How will decisions regarding the research and development program be made in the reorganized enterprise?

5. Is additional government investment in AVLIS necessary? If not, how else might this technology move in a timely manner from the Laboratory to commercial production?

6. Is it possible now for DOE to form some kind of partnership or consortium with the private sector to kindle investment into the AVLIS technology? Is it necessary that the government deploy this technology?

7. Can you give us your opinion of the future of the enterprise without restructuring. What would this mean to national security and defense needs?

8. Is there a sense of urgency for forming the corporation? And if so, why?

9. What is DOE doing to prepare for the transition to a government corporation? Please provide us with a detailed outline of the transition plan.

10. How much money has been reprogrammed from the enrichment enterprise to fund other activities of the Department of Energy over the past 10 years please provide this in yearly amounts. Since the enterprise is charged with recovering all costs of operations, does this mean, as some have alleged, that the utility industry is, in fact, subsidizing government operations?

11. Will the proposed AVLIS facility designed for commercial customers be able to produce highly enriched uranium for the defense needs? What is the limit on the grade of enrichment for the projected AVLIS facility?

12. What percentage of capacity is currently being used at Paducah and Portsmouth?

13. What is the projected effect on DOE's uranium enrichment sales, prices, and ability to recover costs if the Louisiana Uranium Enrichment Plant proposed by URENCO and its business partners comes to fruition?

14. How does DOE propose to assure that all costs associated with AVLIS whether it is ultimately operated or not, are recovered from the nuclear utility industry rather than from taxpayers?

15. What is the current cost per SWU at Paducah and at Portsmouth? What are the major cost elements of the cost of each plant?

16. Does DOE intend to undertake the D&D study suggested by Smith Barney? If so when? Is the Department's report going to include recommendations or simply outline options? Will it include estimates?

17. The Wall Street Journal reported a contract agreement between the USSR and several New England utilities for a reported $250 million. The beginning date of this arrangement is 1994. Could you explain the impact of this supply agreement on the enrichment enterprise? Are any of these utilities currently buying enriched uranium from the UEE?

18. What protection is there for the proposed corporation if the Soviets get more aggressive in marketing their excess capacity?

19. Is the department still trying to work with the Soviets to purchase or otherwise control the amount of Russian material entering the U.S.? Please discuss.

20. What would be the price per SWU if it were mandated that domestic utilities buy only domestic enrichment services? Would there be an impact as well on the price for defense programs? What would happen to foreign customers under such a scenario?

WILLIAM H. TIMBERS, JR.
MANAGING DIRECTOR
(212) 698-6421

SMITH BARNEY

December 6, 1990

Ms. Kathryn Holmes
Committee on Science, Space,
and Technology
B-374 Rayburn House Office Building
Washington, D.C. 20515

Dear Ms. Holmes:

Please find attached Smith Barney's response to the questions submitted by Congressman Robert A. Roe in his letter of November 7, 1990.

I hope the response to the questions supplements my testimony of October 11, 1990 at the Committee hearing on H.R. 2480, the Uranium Enrichment Reorganization Act.

With best regards,

Sincerely,

William H. Timbers, Jr.

SMITH BARNEY,
HARRIS UPHAM & CO. INC.
1345 AVENUE OF THE AMERICAS
NEW YORK, NEW YORK 10105

Smith Barney, Harris Upham & Co.
Incorporated

Responses to Post-Testimony Questions

from the

Committee on Science, Space and Technology
U.S. House of Representatives

regarding the

United States Uranium Enrichment Enterprise

December 6, 1990

1. **HOW WILL RESTRUCTURING TO A GOVERNMENT CORPORATION CURE THE ILLS OF THE ENTERPRISE?**

Implementing Smith Barney's restructuring recommendations, including the creation of a new government corporation, will not necessarily result in a near-term magic transformation of the in UEE into a dynamic business enterprise. Our recommendations will not cure all the ills of the enterprise, because some of them, as you know, are imposed by the market. But making the UEE more flexible and, therefore, more capable of responding to market demands as well as insulating the UEE from non-business pressures is, in our judgment, the best way to maximize the value of this enterprise to the Treasury and to the taxpayers.

-- **WHICH BUSINESS PRACTICES COULD BE CHANGED TO MAKE A SIGNIFICANT DIFFERENCE?**

The business practices in a restructured government corporation would permit the UEE to act quickly in response to customer needs and the competition; to develop operating efficiencies that will yield competitive costs; and to be flexible in its contracting and pricing strategies should be changed.

-- **CAN YOU EXPLAIN WHAT THE ENTERPRISE IS FORCED TO DO OR PROHIBITED FROM DOING TODAY THAT WOULD BE DIFFERENT UNDER THE CORPORATION?**

The UEE is constrained today by:

- existing contracting and pricing inflexibility;
- the Government's short-term budget and planning process;
- conflicting Congressional mandates and Administration objectives;
- a lengthy and complex decision-making process; and
- the lack of a single, coordinated management structure that can establish and efficiently implement both short-term and strategic goals.

It is our belief that a restructured UEE would eliminate these constraints and permit it to operate in a more business-like fashion.

2. PLEASE PROVIDE REASONS, AND EXAMPLES (AS SPECIFIC AS POSSIBLE) BASED ON YOUR UNDERSTANDING OF THE ENRICHMENT ENTERPRISE THAT DEMONSTRATE WHY A CORPORATE STRUCTURE CAN BE MORE COMPETITIVE THAN THE EXISTING GOVERNMENT STRUCTURE?

In an increasingly competitive world market, where product price has become the dominant criterion for nuclear utilities purchasing enriched uranium, the UEE has maintained operating profitability. However, this current and near-term profitability is based on long-term contract prices that cannot be sustained when lower priced, short-term purchases begin to dominate the market.

Without a restructuring that would permit the UEE to enjoy the benefits of operating in a more corporate, business-like fashion, the UEE will enter a period where successful competition will demand operating efficiencies, responsiveness to customer needs and pricing flexibility, but will be constrained by:

- existing contracting and pricing inflexibility;
- the Government's short-term budget and planning process;
- conflicting Congressional mandates and Administration objectives;
- a lengthy and complex decision-making process; and
- the lack of a single, coordinated management structure that can establish and efficiently implement both short-term and strategic goals.

If the UEE were to remain unchanged, it would lose progressively more and more of its commercial customers as its prices became more unattractive relative to world prices. This, eventually, would leave military purchases as the only source of revenues available to pay for the liabilities of the UEE.

3. IN YOUR OPINION, IS GOVERNMENT INVESTMENT IN AVLIS NECESSARY? IF NOT, HOW ELSE MIGHT THIS TECHNOLOGY BE DEPLOYED?

The DOE has already invested a substantial amount of the taxpayers' dollars in the development of the AVLIS technology. The long-term viability of the UEE is closely linked to the costs of providing enrichment services from the existing GDPs (or some advanced enrichment technology) as these costs are compared to the cost of enrichment services from both domestic and overseas suppliers using alternative technologies. With the advancing age of the UEE's existing gaseous diffusion plants (40+ years), the power-intensive nature of these facilities, the increased power costs anticipated as a result of clean air legislation, and the substantial capital investment that may be needed to bring the GDPs into full compliance with environmental, health and safety standards, many observers have linked the long-term future of the UEE to the successful deployment of the AVLIS technology.

The Project Team believes that the costs of continued development and the subsequent deployment of AVLIS should be the responsibility of a new government corporation or its successor private corporation. Furthermore, we recommended in our Report that the proposed government corporation be "authorized to issue public debt, pledged by revenues, to the extent possible" and to permit "borrowing from Treasury if unable to access capital markets". We anticipate that any borrowings from Treasury would be for general corporate purposes during the initial start-up period of the corporation while a strategy for accessing the capital markets is developed and implemented. We did not anticipate AVLIS' capital costs to be financed through Treasury borrowings. We would expect that the proposed government corporation will have developed the appropriate mechanisms to raise capital on its own credit by the time capital expenditures are incurred for AVLIS. In this manner, the future use of this technology will be based primarily upon commercial considerations rather than the type of conflicting political factors that influenced the capital investment in the Gas Centrifuge Enrichment Plant.

-- **WHAT STEPS NEED TO BE TAKEN TO MAKE PRIVATE SECTOR INVESTMENT FEASIBLE?**

Presently, since AVLIS technology is not developed sufficiently and the risk is too high, the private sector would not likely be interested in AVLIS.

The private sector will consider both technology and market risks as the major determinants of its participation in AVLIS. Under the technology risk, the private sector would examine the stage of development of AVLIS technology and the perceived risk of continuing its development.

When considering market risk, the private sector would consider the prospects of receiving an adequate return on its investment in AVLIS and, more generally, in the UEE. This judgement by the private sector as to whether to invest capital would be made in a manner similar to other commercial enterprise investments. It would be based upon the economic, financial and competitive condition of the enterprise and its AVLIS project. By eliminating the constraints we have previously identified and permitting it to operate in a more business-like fashion, the private sector's perception of the UEE as a good investment, providing an adequate return, will be strengthened. This is important because, to the extent restructuring the UEE will enhance its position to attract private sector capital (i.e., increased flexibility responsive to marked demands, insulated from non-business pressures, etc.), there will be a reduced reliance on government funding of AVLIS. This is a clear example of how the Treasury and the taxpayer will benefit from restructuring the UEE.

4. DOES SMITH BARNEY BELIEVE THE AVLIS TECHNOLOGY IS IMPORTANT TO THE ENTERPRISE WHETHER COMMERCIAL OR GOVERNMENT? WHY OR WHY NOT?

The Project Team believes that the AVLIS technology can be a significant factor affecting the government corporation's ability to compete in the emerging short-term/spot market. With the DOE's cost estimates, or those more conservative estimates by the Project Team, the development of AVLIS has the potential to produce significant savings in UEE's cost of producing enriched uranium.

By deploying AVLIS in 2002, the Project Team's analysis indicates that the UEE could potentially reduce the cost of production of SWU by 37%.

Notwithstanding the possibilities of deployment delays and higher-than-estimated costs, the deployment of AVLIS can result in:

- enhanced market share;
- enhanced revenues; and
- greater means to enhance value to the Treasury from annual cash flow and potential proceeds from a future privatization sale.

5. THE SMITH BARNEY TEAM RECOMMENDS THAT DOE SHOULD BE CHARGING THE CONTRACT CEILING PRICE. PLEASE DISCUSS: WHAT WOULD HAPPEN IF DOE RAISED THE PRICE PER SWU?

Most of the current world demand for SWU is committed by contracts. For UEE customers, there is a published ceiling price for future years and the current USEC contracts have termination penalties which, with these contracts currently at the ceiling price, make it uneconomic to prematurely terminate the expensive UEE contracts and buy on the less expensive world market. As a result, we examined the termination penalties on the current USEC contracts and determined at what ceiling price customers would economically benefit from: (i) terminating their contracts, (ii) incurring the penalty and (iii) buying SWU in the open market. With the spot market for SWU continuing to develop, if DOE were to significantly raise its ceiling price, it would become economically beneficial for UEE customers to terminate their contracts sooner, looking to the spot market to meet their enrichment needs.

-- **SHOULD DOE FORCE EARLY TERMINATION OF EXISTING CONTRACTS?**

Assuming that DOE wishes to maximize the value of the UEE, forcing early termination of existing contracts would only be appropriate if the UEE could either increase market share and/or increase price. We do not believe that either of these goals is achievable or advisable. Our analysis found that if DOE sharply increased its SWU price above the ceiling price, there would be a significant drop in SWU sales resulting in a negative net present value of cash flows.

As discussed in the Report, if DOE were to lower its SWU prices below the ceiling price, the Net Present Value of the enterprise could be reduced by as much as one-third. The structure of the SWU marketplace until 1996 is such that the majority of available demand is under contract. Because of the small amount of uncommitted demand, lowering the price charged for supplying SWU could not generate a significant increase in sales volume. Therefore, the UEE would end up selling approximately the same amount of SWU, but would receive significantly less in total revenue.

In either case, DOE would not be maximizing the value of the UEE by forcing early termination of existing contracts.

6. YOUR REPORT CAUTIONS AGAINST LOADING TOO MUCH DEBT ON THE CORPORATION. DOE HAS PROPOSED IN ITS BUDGET REQUEST TO PROVIDE FUNDS FOR BOTH REPAYMENT TO THE TREASURY AND ESTABLISHMENT OF A D&D FUND. DO YOU BELIEVE BOTH CAN BE BORNE BY THE CORPORATION UNDER COMPETITIVE MARKET CONDITIONS? IF SO, HOW WOULD THIS DEBT BE ACCOMPLISHED, IN YOUR OPINION, PLEASE DISCUSS.

It is important to note that no one knows what the appropriate funding level is for a D&D fund, because no one yet knows how much it will cost to decommission and decontaminate the enrichment facilities. Among the issues that have yet to be addressed are:

- What D&D technology should be used?
- How much will that technology cost?
- What is the proper allocation of costs between military and civilian use?
- Of the civilian portion, what is the appropriate share of costs for a new corporation on a going-forward basis?

Answers to these questions must be found before we can determine the financial impact of D&D funding on a restructured UEE. However, for illustration purposes, we found that in our Composite Benefits Case there was significant available cash flow for payments to the Treasury after setting aside $50 million per year into a D&D fund.

In a restructured UEE, any "repayment" scheme to the Treasury should be viewed as a dividend payment to the sole stock-holder, the Government. Consistent with sound business-like practices, the new corporation's Board of Directors would establish a retained earnings policy, balancing the requirements of the dividend payments and sound business practices, that will permit the corporation to access the capital markets. In this manner, providing funds for both it's share of D&D costs and for "repayment" to the Treasury can be prudently borne by the corporation.

7. WOULD YOU DISCUSS THE POLICY COSTS CATEGORY IN THE UNRECOVERED DEBT SECTION? HOW DID YOU DETERMINE WHICH COSTS WENT INTO THIS SECTION AND WHY?

The costs included in the Policy Costs category include three items:

1. An excess capacity write-down calculated and recorded by UEE (ultimately a plant was closed).

2. Abandoned plant - the GCEP start-up which was abandoned before operation.

3. Energy costs - for contractual commitments for which power was not delivered and currently is undeliverable.

We have described these as policy issues because the legal right of the UEE to recover or decide not to recover these costs is a matter of dispute between the DOE and the GAO, a policy dispute which has not yet been resolved by Congressional or judicial action.

-- **CAN YOU EXPLAIN HOW A PRIVATE SECTOR BUSINESS WOULD HAVE HANDLED THESE ITEMS DIFFERENTLY? AND, FROM A BUSINESS PERSPECTIVE, WHY WOULD THEY HAVE DONE SO?**

Responses to this question about private sector treatment of such costs under generally accepted accounting principles require specific circumstances to answer concretely. However, some general observations can be made.

(This question has to be answered separately for a non-rate regulated versus a rate-regulated business.)

Non-Rate-Regulated

- If a company determined that its fixed assets were impaired, it would record a write-down for the excess capacity.

- If a company abandoned a new plant, it would write down that plant to its next realizable value and accrue all costs for disposal.

- If a company entered into a settlement agreement for costs to which it was not entitled to services - such as the TVA contract - it would accrue all such costs as an expense.

Obviously, the company's owners would suffer a loss in value for such expenses unless they could require some other party to reimburse them for these losses.

Rate-Regulated

- Accounting depends upon rate actions by regulators.

- If recovery of these costs is allowed in rates, the costs are recognized as revenue is recorded.

8. WHAT DO YOU SEE AS THE CRUCIAL TIME FRAME IN WHICH THE U.S. GOVERNMENT MUST ACT? IS THERE A SENSE OF URGENCY FOR FORMING THE CORPORATION? AND IF SO, WHY?

UEE's current profitability is based upon long-term contracts with commercial customers at above-market prices. These contracts begin to terminate after 1995. It is expected that the pace of contract terminations will accelerate in the post-1995 time frame. It is at this time that a highly competitive business battle will begin. And the battle will be for the U.S. market-place where 70% of uncommitted demand in the world will develop.

It will take some time to implement these changes and to realize the benefits of restructuring. If the United States is to be competitive in this battle in the mid-1990's, now is the time to effect these changes.

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX 2003
OAK RIDGE, TENNESSEE 37831

January 4, 1991

Honorable George Brown
Chairman, Committee on
Science, Space and Technology
Attention: Kathryn Holmes
B-374 Rayburn House Office Building
Washington, D.C. 20515

Dear Mr. Chairman:

This correspondence is in response to a request from former Chairman Roe dated November 7, 1990. I have enclosed responses to his questions for use in supplementing the record of the October 11, 1990 hearing on the Uranium Enrichment Reorganization Act.

The necessity of having this issue resolved in the 102nd Congress is critical as the window of opportunity for positioning this program to remain viable is rapidly closing. If steps are not taken to enable the enterprise to operate in a competitive, commercial manner, customers will continue to lose confidence resulting in additional market share decline. It is our belief that restructuring this business now is in the best interest of the American taxpayer. I remain resolutely and emphatically supportive of the Department of Energy's efforts to restructure the Uranium Enrichment Enterprise and urge you, as the new Chairman of this key Congressional committee, to move swiftly on passage of this or similar legislation.

If I can be of any further assistance with this issue of national importance, please do not hesitate to call upon me.

Sincerely,

Kenneth W. Sommerfeld
Enrichment Vice President

KWS:mm

Enclosure

Please provide reasons, and examples (as specific as possible) based on your understanding of the enrichment enterprise that demonstrate why a corporate structure can be more competitive than the existing government structure?

Two basic elements in becoming more competitive are improving the range of services offered and pricing at the market rate. A corporation could achieve these primary objectives with the following organizational capabilities not available within the present government structure: greater responsiveness to market needs and competitor actions; improved flexibility in tactical and strategic actions; a commercial financial focus; and an entrepreneurial approach to all aspects of the business.

An enrichment corporation would be able to offer a greater range of services and provide new flexibility to address customer needs and changing market conditions. A prime example of added flexibility would be tailoring enrichment service contracts to the individual requirements of customers. Contractual terms that could be negotiated individually would include:

- duration of the contract
- lead-times for feed and product deliveries
- timing of commitments and notifications
- payment schedules
- pricing escalators and formulas

Other new services that could be offered would include:

- sales of enriched product
- just-in-time delivery agreements with converters and fabricators
- enrichment of reprocessed uranium
- fuel cycle planning services
- loans of enriched uranium and enrichment inventories
- financing for enrichment purchases
- sales denominated in other currencies

In addition to these specific examples, short-term opportunities for low-cost production could be marketed aggressively to benefit both customers and the corporation.

The greater range of services must be matched with competitive prices to assure a viable enrichment corporation. Because the corporation will be totally dependent on its own revenues and its ability to attract new capital from commercial markets, it will, by necessity, be more financially oriented and more time conscious than a government agency. This financial orientation will focus on reducing or containing costs in four major areas: (1) electric power, (2) operations, (3) remedial actions and waste management, and (4) decontamination and decommissioning.

Although significant cost reductions in the electric power component have already been

achieved, an improved entrepreneurial approach can make further improvements. Specific areas of opportunity include (1) taking full technical advantage of the capabilities of the gaseous diffusion plants to use off-peak power and (2) exploring more flexible purchasing arrangements with the multiple power suppliers that can supply electric energy to the enrichment sites.

The cost of operations could be reduced through the streamlining of the multiple layers of oversight in the current system that require significant resources on the part of the operations and maintenance organizations.

The cost of remedial action and management of wastes, primarily from prior operations, is a liability that has been recognized by the DOE during the last several years. The corporation would be required to recognize the financial liabilities and establish reserves to cover the remediation and long-term waste management costs. This financial liability will lead to a greater focus on the most cost-effective means to satisfy regulatory requirements while maintaining a viable competitive business. The more streamlined regulatory environment of the corporation would also permit faster clean-up with resultant lower costs.

Finally, the eventual decontamination and decommissioning of the gaseous diffusion plants is the largest unfunded liability of the enrichment enterprise. The proposed corporate structure would establish, for the first time, a mechanism to fund the commercial liability from the enrichment business. As discussed in the responses to later questions, the additional flexibility of a corporation, coupled with an entrepreneurial approach, can yield many opportunities to reduce the negative impact of this liability on the success of the enrichment enterprise.

A corporate structure would also be better able to maintain competitive prices by utilizing new technologies and pursuing entrepreneurial ventures. As AVLIS is determined to be an economically viable technology and one which can competitively enrich uranium, then its deployment would be initiated on a commercial basis. The AVLIS technology could more easily integrated into the enrichment business in accordance with market demand, i.e., plant appropriately scaled for market conditions. This would most likely result in a phased scale-up of AVLIS capacity to achieve an early market entry at lowest capital investment. Later capacity would be able to exploit continuing technology and cost enhancements in the laser, optics, and metal vapor technologies. This continuous upgrading will be absolutely necessary if the U.S. is to maintain its current worldwide leadership with AVLIS. A corporate structure would be most capable of making such decisions and maximizing returns to the taxpayers. Moreover, a reorganized enrichment corporation would be better able to pursue more flexible cooperative agreements with other fuel cycle participants, which is vital if the nation is to regain its competitive position in the world enrichment market.

What services might be provided to existing customers other than enrichment services? How may customer needs be different and what opportunities are there, in your view for attracting new customers under a corporate structure? What percentage of the total business revenues might be attained through such services?

There are many strengths the enterprise has which it could draw upon in expanding its services to customers under a corporate structure, with the well trained and highly-skilled work force being the most valuable strength. The talents and skills of the work force extend to many areas including operations, research and development, and engineering. Possible other services might include consulting in areas such as:

- waste management,
- power management,
- decontamination and decommissioning,
- chemical process technology, and
- porous materials development.

Examples of possible new services would include:

- harvesting and reprocessing of uranium in weapons no longer required, and
- applying the expertise learned from undertaking D&D at the GDP sites and transferring the knowledge to other industrial applications on a for-profit basis.

DOE currently provides limited "modifications" of contracts which can be classified as other services to customers in addition to enrichment services. Some of these modified services are formalized contractually (e.g., reduced notice time to place orders) and some are handled informally (e.g., changing quantities and assay of product after the order has been placed). With a corporate structure, the enterprise could differentiate the services it provides by negotiating individualized contracts. In this way different customers' needs could be met with individualized contracting with payment for the services being negotiated on individual bases. A corporate structure would greatly enable contracting in this manner by expanding product differentiation to include packaged deals with other fuel cycle participants.

One example of increased customer service is the delivery of product much later in the fuel fabrication process. A corporation could provide this much desired benefit easier than DOE, by placing inventory at fuel fabricators which could be transferred to customers at the fabricators instead of much earlier at a DOE facility. The Soviet Union has done just this. Other examples include extended payment terms, packaged services, loaned enriched uranium and fuel services financing.

The customers of enrichment services may be differentiated by what percentage of their

enrichment needs they rely upon fixed contracts or the spot market for enrichment services. The buying practices of a particular utility is, to some degree, a factor of what percentage they desire to be covered under contract and what percentage they wish to rely upon the spot market. Some utilities are more willing to rely on the spot market for a greater portion of their enrichment requirements and therefore would welcome a more flexible contract linked to market prices. On the other hand, many domestic utilities and several Japanese utilities are less willing to purchase from the spot market and therefore prefer a greater portion of their enrichment needs be covered by longer term contracts. These utilities desire dependability more than flexibility.

Another difference that exists among the numerous utilities is the type of services desired. Some utilities value only enrichment services while others desire other packaged services along with enrichment, such as integrated fuel delivery or even reprocessing. These differences are why the ability to customize contracts is essential to being a strong competitor in today's enrichment market.

While it is difficult to predict what percentage of total business revenues would be attained by providing individualized contracts, it is reasonable to assume that in the current competitive environment these services would greatly enhance the U.S.'s position as a provider of enrichment services. These services would enhance the customer's perception of the enterprise as an effective competitor. However, before the perception can truly be changed, the enterprise must demonstrate commercial behavior by being responsive, flexible, and capable of reducing costs through new technology deployment.

Martin Marietta is a private sector corporation, if your company was running this program without DOE directives and regulations, how would it do business differently? Please be as specific as possible.

If Martin Marietta were positioned to take responsibility for operating the Uranium Enrichment Enterprise without DOE directives and regulations, changes would be rapidly implemented in five functional areas: marketing, finance, operations, management, and environmental health and safety (ES&H).

MARKETING: The services of the enterprise would be competitively marketed and more responsive to customer needs and market conditions. More innovative and entrepreneurial approaches would be explored in exercising the full potential of the enterprise. Improved marketing opportunities would include customized contracts to meet individual customer needs; pricing flexibility based on cost or value of services; and increased variety of offered services, such as fuel purchase financing, material loans and just-in-time agreements with converters and fabricator. Martin Marietta, or another private entity, would also take a more aggressive, responsive marketing approach by hiring, rewarding, and retaining seasoned marketing personnel; enabling and empowering marketing personnel to be responsive to customer needs; and instituting pre-emptive market strategies to hold or gain market share.

FINANCE: As a private corporation the enterprise would rely upon funding from sales and private financial market offerings, conform to commercial accounting principles in the recording and reporting of financial transactions, and be audited in accordance with auditing standards appropriate for a commercial entity. The financial management of the enterprise would have the ability and flexibility to capitalize on unexpected market opportunities and promptly redirect resources to meet changing market conditions. Increased fiscal accountability and control through the application of commercial accounting standards would facilitate an independent audit of financial control systems and procedures and improve the perception of the enterprise as a stable, viable business. The business would be given a profit and performance orientation which would establish a defined bottom line for the business, determine how resources would be applied and provide strong incentives for sales growth and cost control. This would instill the discipline necessary to borrow from private financial markets and provide for financial based analysis of investment alternatives. Managerial control of the enterprise's performance would be improved through detailed monthly reviews and analysis of budgeted versus actual performance and profit orientation. Not only would cost saving

measures be employed but revenue generating mechanisms, such as the sale or alternative utilization of presently non-productive assets, would also be aggressively pursued.

OPERATIONS: Production and inventory management decisions would be based on market criteria and projects would be completed in a timely and cost efficient manner or terminated on commercial terms. More cost effective inventory management would be achieved through improved managerial systems and stronger fiscal and financial controls and individual accountability. Improved contracting flexibility would facilitate an aggressive power cost management strategy through expansion of unfirm power utilization and creative arrangements such as power-for-SWU swaps. This flexibility would also facilitate a reduction of product order lead time and elapsed time between uranium delivery and enriched product shipment through such arrangements as just-in-time agreements and strategic partnerships.

A restructuring of the organization to a commercial structure would reduce the layers of management and institute greater individual accountability and responsibility which would subsequently reduce the need for multiple reviews and approvals and reduce overhead staff. Efficiency and productivity improvements through employee incentive award programs would reduce non-power costs in the range of 10 - 15%. The success and survival of the business would be directly linked to productivity improvements. Martin Marietta presently has a large staff and multiple layers of management in order to interface with respective layers of personnel in DOE and regulatory agencies. Under the new structure, Martin Marietta would primarily be interfacing with its end customers and thus be able to achieve a reduction in staff and management positions not otherwise possible.

MANAGEMENT: The management would be responsible to a Board of Directors which would provide the business with a strong, clear commercial mission and establish a visible cultural redirection. Currently the Uranium Enrichment program has a board which consists of two houses of Congress and the various interests represented within the executive branch. Consequently, the program does not receive the focus typically found in a commercial setting. If private, the business would be more focused and could recruit and retain commercially oriented personnel, streamline decision making, establish clear lines of authority and accountability, institute measurable, quantifiable performance criteria and provide incentive award systems directly linked to business performance. These attributes cannot be achieved in the current agency structure.

ES&H: Managers of the ES&H issues would be given greater contracting flexibility to allow more rapid utilization of waste management and environmental specialists, such as strategic partnering with other private firms who specialize in environmental restoration. Greater contracting flexibility would also facilitate initiation of R&D programs that could identify and execute more cost effective and efficient clean-up and disposal technologies. Transfer of waste management technologies developed would permit the enterprise to increase its return on investment by offering both technological solutions and highly skilled labor on a for-profit basis to other industries confronting similar problems. The result could lead to more efficient clean-up of other major sites and assist in our national effort to restore our environment.

In summary, a private corporation, by providing an appropriate legal foundation and operational flexibility, could respond rapidly to changing market conditions. Decision making would be streamlined by reducing the layers of management, delegating decision making to the lowest possible level, and flattening the organization structure by increasing the span of control through greater organizational and individual accountability. The time and cost of capital acquisitions and improvements would be reduced by making decisions based on prevailing market conditions and sound financial analysis of investment alternatives. The business would be given the appearance and function of a strong commercial entity, thus increasing customer confidence in the reliability and stability of the business. ES&H issues could be effectively and efficiently controlled. And finally, the enterprise would be more capable of meeting the intent of the Atomic Energy Act and the Nuclear Nonproliferation Act by maintaining a viable domestic provider of enrichment services and by remaining a player in nuclear non-proliferation policies. All this would have a very positive impact on the enterprise's competitive position.

Do you see an opportunity to create a consortium or partnership in the private sector to develop AVLIS, or deploy AVLIS? What steps need to be taken to facilitate such a move or moves?

The opportunity to create a consortium or partnership in the private sector to develop/deploy AVLIS may exist, though the opportunity is primarily with deployment. However, private sector involvement with the development and demonstration of AVLIS is critical if the private sector is to become interested in deploying the technology. Potential interested participants would include the electric utilities, fuel fabricators, or other major nuclear fuel cycle participants.

The DOE plan for AVLIS has private sector participation as a major thrust centered around the competitive selection of a commercial deployment contractor (CDC). We strongly support this private sector involvement as a necessary element in the commercial deployment of the AVLIS technology. The role of the CDC is to transition the AVLIS program from the laboratory to production as an entrepreneurial oriented entity. It is very important the DOE continue aggressively on its track to select a CDC to participate in the demonstration program and begin transfer of the technology for deployment.

A successful demonstration and other actions necessary for deployment can be facilitated by the restructuring of the Uranium Enrichment Enterprise. Issues which must be addressed before full private commitment is possible include NRC licensing, safeguards and security, and site selection. Under the corporate structure, these concerns can be more efficiently resolved. As an example, the restructuring legislation clearly assigns sole responsibility to the NRC for the nuclear licensing of an AVLIS plant. The new enrichment corporation would obtain an NRC license that would apply directly to private ownership of an AVLIS plant. Without the legislation, the AVLIS plant will likely be required to meet both DOE and NRC regulatory requirements. Such dual federal regulation invariably results in delays and cost increases as redundant and conflicting requirements are debated and compromises are made in implementation. This regulatory situation would make private participation much more difficult.

From our conversations with the nuclear industry, we believe a major action which will encourage private interest in AVLIS is approval of the 1992 design only line item funding for the AVLIS plant. This is an important signal to industry that the U.S. Government has confidence in the AVLIS technology. The DOE should continue on its announced AVLIS schedule to ensure that a restructured enrichment enterprise has the technical, economic, and design data necessary to realize the competitive advantage of AVLIS.

Please discuss the current activities being performed for decontamination and decommissioning (D&D) of the Oak Ridge Gaseous Diffusion Plant. Is there a clear D&D plan? If MMES had complete control of D&D, how would the Corporation proceed (if different from DOE program).

Current activities being performed are mostly in the area of surveillance and maintenance of 52 buildings (encompassing 300 acres of floor space) to assure that no unacceptable environmental, safety, or health conditions will develop as a result of the shutdown condition at Oak Ridge. Equipment and building areas containing polychlorinated biphenyls (PCBs), asbestos, fissile material, coolant, and lubrication oils are inspected and maintained on a regular basis. Fire protection systems, contamination control monitoring stations, and utility systems required to support these functions are also maintained. The cost of utility services and safeguards and security functions are also part of the Surveillance and Maintenance phase of the D&D budget. Along with Surveillance and Maintenance, Phase I D&D activities are being performed to reduce any potential for environmental insult or impacts on health or safety of site personnel and the public from the regulated hazardous constituents that remain in the process facilities. Included in Phase I hazardous materials disposition are PCB's, asbestos, coolant, lubrication oils, and localized deposits of uranium. Phase I activities began in FY 1988 and, depending on budget levels, are expected to be complete by FY 2001. The Phase I hazardous materials management program is required for the continuing compliance with state and federal laws and regulations governing these materials. A study is currently underway to define the regulatory environment with regard to the disposal/recycle of materials and equipment resulting from ultimate D&D.

There is a D&D plan which is delineated in the **Gaseous Diffusion Complex Decontamination and Decommissioning Strategy Report**, which has been issued in draft form to the DOE. This document is periodically updated and the latest update was issued on March 7, 1990. The Strategy Report defines the activities and recommends five year budgets for the surveillance and maintenance activities and Phase I removal of hazardous materials. Along with surveillance and maintenance which must continue until the facilities are decommissioned, a two phase program to D&D the Oak Ridge Gaseous Diffusion Plant (ORGDP) to a final endpoint (e.g. decontamination for reuse, in situ disposal, etc.) is currently planned. Phase I, as noted above, is to reduce the potential for environmental insult or impact on health or safety of site personnel and the public from the regulated hazardous or radioactive constituents contained in the process facilities. The purpose of Phase II is to provide a long-term solution for facilities for the D&D of the large quantities of process equipment, auxiliary equipment, the process buildings and associated contaminated concrete and soil. Depending on budget level to support both the planning and the physical work, physical Phase II

work is forecasted to begin in FY 2002 and take approximately 15 years. One major uncertainty in starting any Phase II decommissioning is the acceptable endpoint and method for decommissioning uranium contaminated structures and equipment. In addition to the Strategy Report, current year work plans are available for FY 1991 based on the presidential budget.

The process of decontamination and decommissioning would be considerably different if it were the total responsibility of a private firm. While the regulatory framework is the primary determinant of D&D activities, the management and execution of activities would be approached in a more business-like manner.

A private approach to the D&D issue would first establish clear criteria that the activities must meet. This criteria would be established in accordance with regulatory requirements and would include a detailed risk/benefit approach. An example of how this approach has been employed is the clean-up activities of uranium mines and mills which includes mill tailings. The NRC published a study which demonstrated the lower cost approach employed by the private sector versus the high cost realized for sites managed by the government under the Uranium Materials Reclamation Act (UMTRA) legislation. These lower costs were realized while achieving full compliance with federal, state and local regulations. Similar approaches would be developed and implemented if the concepts in commercial market were utilized. Secondly, a private firm would clearly define the technical options for meeting the established criteria. It is quite conceivable that R&D funds would be expended to develop and/or improve the technical solution. In addition, a private concern would focus upon efficient methods of meeting requirements by identification of legislative and regulatory changes that would lower the cost while preserving an environmentally sound approach.

Unlike the government, a private firm would have approached D&D earlier and would have been funding a reserve to offset a portion of or all of the costs associated with future D&D activities. It would be in the best interest of a private business to resolve the D&D issue quickly and efficiently in an effort to protect its owners and minimize the impact upon future customers. The result would assure a stronger potential for long-term stability. Unfortunately, the early military history of the existing facilities and a subsequent conversion to commercial use has complicated the issue of liability. In addition, government accounting policies, established by Congress, do not easily permit pre-funding of future and undefined liabilities. As a consequence, when liabilities such as the D&D issue arise the effort becomes driven by the need to collect large sums of money rapidly. End results are not defined and therefore the broader implications of a hastily developed policy are ignored. The result is costly inefficiency to achieve an undefined end. In a commercial setting this political approach to sensitive issues would not occur to the same extent as in the federal sector.

Additional benefits to a private approach would include explicit planning for reuse of facilities and/or equipment to reduce overall costs of the D&D effort. All R&D expenditures for decontamination activities would be made with the clear intent of reuse of technology and equipment at other facilities. Standards would be aggressively pursued that would permit reintroduction and reuse of industrial materials such as nickel, copper and steel which exist in significant quantity at all of the gaseous diffusion plants. Methods would be employed that would focus upon turning portions of a large liability into an asset and maximizing the value to the owners while meeting legal and moral obligations to the American public. A ready example of this business approach is the now privately owned British Nuclear Fuels, Limited (BNFL). This particular company is aggressively marketing technology and consulting services based upon prior experience in the decontamination of the United Kingdom (U.K.) GDP facilities. A portion of the former enrichment complex at Capenhurst now houses centrifuge equipment that is part of the URENCO consortia that is currently competing with the DOE for enrichment services. This aggressive competitor has also established an American subsidiary to market waste management services. This emerging area of business opportunity could also be available to a restructured, market-oriented domestic enricher.

Is there any significant D&D activity going on at the Oak Ridge plant today or is it simply remedial action?

Currently Oak Ridge clean-up activities can be characterized as occurring in three parts:

(1) Surveillance and maintenance of all GDP facilities including monitoring, inspection, repairs, housekeeping, safeguards and security protection, and NDA survey

(2) Phase I D&D projects to bring about compliance with existing laws have been planned and engineered and are underway to protect the health and safety of the public and the workers. These projects include:

- Asbestos abatement and removal
- Hazardous material removal - PCB, PCB containing equipment, chemicals, lube oil, etc.
- Assessment activities - characterization of materials present, planning for D&D
- Cleanup and decontamination of centrifuge facilities and equipment
- Radiation contamination control - surveys, equipment upgrades and modifications
- Cooling tower removal
- Criticality safety enhancements to remove significant accumulations.

(3) Remedial actions have begun to investigate site ground and water contamination. These projects include:

- RCRA Facility Investigation of cooling towers, RCW lines, electrical switchyards, chemical facilities, contaminated/classified burial grounds
- Removal of underground storage tanks

Additionally, some equipment from the ORGDP has been (and will continue to be on an as-needed basis) removed and transported to the Paducah and Portsmouth Gaseous Diffusion Plants. While the major purpose for this activity is to provide an inexpensive source of spare parts for the operating plants, it is in effect beginning the decommissioning of the ORGDP.